An Argun Specialist Publication

No.52 March 6-12, 1984

DRAGON

For the LSR Spectrum

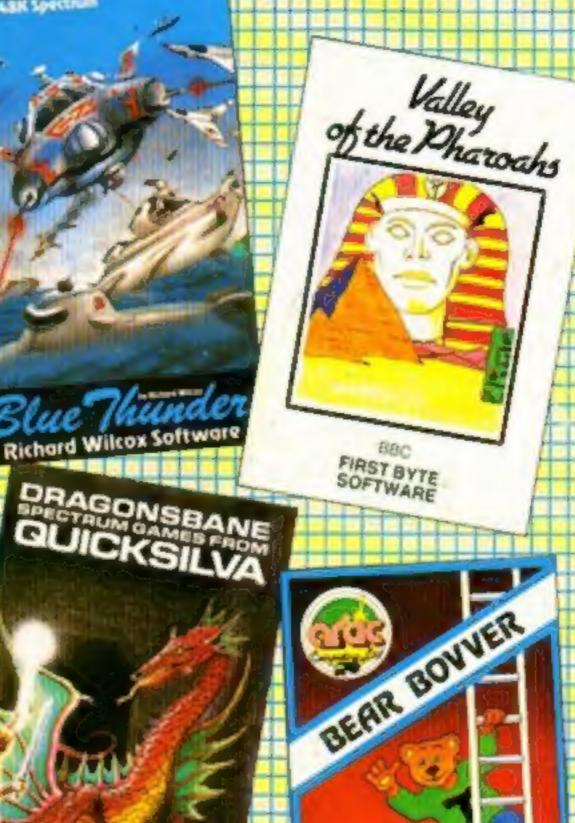
Onne

Three pages of Spectrum software reviews, PLUS: Dragon, Oric, BBC, Texas, CBM 64, Atari

**Blue Thunder**, a great new game from **Richard Wilcox** Software

**Two games** listings for the Dragon

AND programs for BBC, Texas, commodore 64, Spectrum



## **X** films on your computer

40p

Feature films are to be turned into computer games by a new software company which will release its first game in the summer.

And some will be based on X-rated films, said the 29-yearold boss of Palace Software. Pete Stone.

He has been with Video Palace, the big Oxford Street video and computer software store, for two years. Palace Software is part of the Palace group, including Palace Video, which distributes to about 6,000 video shops, and film makers Palace Pictures.

This means that the new company has access to the nontheatrical rights of many major films - and talks are going on with other film companies too.

Mr Stone would not name the films on which he is planning to base games.

But Palace Video distributes horror titles like The Evil Dead, Continued on page 5

## **Micros and** the future

ALSO: U.S. Scene, your letters, One Man's View





Eleven out of every 100 families now use a home computer and this time next year it will be one in five.

Then the rise will slow down, according to Peter Stoddart, whose company has just published a report on home computers and software.

Next year, he said, a quarter of households would have a micro, rising to half in 1990.

At the time researchers questioned 2,000 families in January, the six leading models accounted for 87 per cent of all computers in use - see table.

And Mr Stoddart expects the dominance of these manufacturers to increase, unless their rivals can come up with better products.

The report says that the ownership of computers has grown from an insignificant one per cent in 1979. Last year 1.19m people bought micros -40 per cent of them in the two pre-Christmas months.

Ownership was higher than Continued on page 5

On a hostile planet deep in space an earth patrol is marooned. Only one person can save it.

# The galaxy's most lovable battle wagon.

"Bits" he says. That's not the idea That's not the coupon That's send the anyway. at all. But send ue anyway. for my catalogue anyway.

NAME

ADDRESS

Rabbit Software Ltd. The Warren

Kapont Somware Ltd., Ine marren (Unit 11), Forward Drive Wealdstone, (Unit 11), Middlesex HA3 SNU

Narzon Heatseekers from the back, LasaSlamma Tanks in front. HeliChargas from above.

A friendly mission to Zon has become a desperate fight for survival.

Now, as Troopa Truck trundles and leaps across Zon's surface, only one person in the galaxy can save it.

You.

The ticket to Zon is \$5.99 (RRP inc. VAT), and the journey starts at Boots, WH Smith, Rumbelows, or any intergalactic computer games shop. Your Commodore 64 will love it to bits.



Brilliant on Spectrum, VIC-20 & CBM-64.

#### CONTENTS



## More with your Sord

CGL, which markets the Sord 5, has introduced a new starter pack. Pay £149.95, and you will get the M5, a cassette recorder, BASIC I in a ROM cartridge, introduction to programming, manual and users' guide and two games on cassette. In addition all M5 purchasers become members of the M5 Users' Club.

CGL, Goldings Hill, Loughton, Essex IG10 2RR



Hot from the man who gave you Up Periscope is Kriegspiel in which you become a tank commander. There is a choice of three different scenarios normal, desert and mountain. You can play against a friend or against the computer. The winner is the first to take control of the opposing side's HQ. Kriegspiel runs on the Dragon 32 and costs £6.95.

Beyond Software, Durrant House, 8 Herbal Hill, London

# Hit the jackpot with our great fruit machine game Arcade action for BBC, Oric, Atari, Dragon Win Blue Thunder from Richard Wilcox Software Make moves with an "invisible screen" Space games for Texas, BBC, Dragon Test your skill in the Monaco Grand Prix Eyes to the skies... and blast the bombers Adventures for BBC, Commodore 64, Spectrum Games for BBC and Spectrum You're Ribbet the frog... watch out for Sid the snake

# March 6-March 12, 1984 No. 52

To advertise your latest products! Ring Coleen or Barry on 01-437 1002 NOW!

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...

## Date for your diary

The Manchester Home Computer Show will be held at the New Century Hall, Manchester, on April 5-7. The organisers say there will be a wide variety of stands showing the latest hardware and software. Admission is £2, half price for under-16s.

Home Computing Weekly is one of the sponsors of the show, which is organised by Argus Specialist Exhibitions.

Argus Specialist Exhibitions, Park View House, I Park View Rd, Berkhamsted, Herts HP4 3EY

TI-994A program Mind the flak, destroy the dam	
Software charts	
Dragon 32 program You've moved into No. 10. How	
Letters	
Editor: Paul Liptrot Designer: Bryan Pitchford Managing Editor: Ron Harris Chief Executive: Jim Connell	Divisional Advertisement Manager: Coleen Pimm Advertisement Manager: Ricky Holloway Assistant Advertisement Manager: Stuart Shield Classified Advertising: Debra Stupple
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There are programs for all these computers this week — Dragon, pages 10 and 47; Spectrum, pages 18 and 24; BBC, page 36; Commodore 64, page 28; TI-99/4A, page 39





CREDIT CARD HOTLINE 0382 88833 SOFTRICKS, 1 ROWAN PLACE, DUNDEE DD3 0PH

# NEWS

# X films

Basket Case and The Honeymoon Killers. Its comedies include That Sinking Feeling and Loose Connections made by Bill Forsyth, who produced Local Hero and Gregory's Girl — and The Rutles and Whoops Apocalypse.

Others include the X-rated science fiction film Alphaville, An Unsuitable Job for a Woman, Diva, Merry Christmas Mr Lawrence — starring David Bowie and Tom Conti — The Moon in the Gutter, with Natassia Kinski, Fitzcarraldo, Pixote and Mephisto.

Its catalogue also has music video tapes and instructional and documentary releases.

Among them: Steve Davis on snooker, Jackie Genova on exercising, a cartoon video for children and four titles by Andy Warhol.

Mr Stone, who at present has two full-time programmers, said: "At present it looks like our first game will be based on a film. But until we know for certain that we've got a good game in the bag I don't want to commit myself."

Would he convert X-rated films into games?

He said: "Certainly not sex films. But half the Top 10 in the West End are X rated. We are talking about two different things. Take a shooting scene. That may make it an X-certificate film, but in computer games it's standard.

"I would not put out anything that would upset parents. I would not want to end up with X-rated games. Our games will be no more X-rated than any

#### From front page

average in households where the "male head of household" was aged 15-24 or 35-54.

The report says: "Commodore's market share has increased from 12 to about 22 per cent while Sinclair's has dropped marginally from 58 to 49 per cent.

"The BBC model B doubled its market share from five to 10 per cent, but Dragon must be disapointed that they failed to increase their share from five per cent in Janauary 1983."

The report, by Gowling Marketing Service, says the sale of software by mail order appears to be declining a that less than 15 per cent was bought in this way.

Last year computer users bought about 11.3 m items of software — about five per user — and of these 70 per cent were arcade and adventure games and educational packages amounted to 23 per cent.

In 1984 Gowling predicts that sales could reach 12.6m with the games percentage rising to 74 per cent.

This year should also see "exciting" opportunities for makers of peripherals, says the report. It comments: "While it is dificult to estimate the value of this market, it is likely that micro users will spend at least the equivalent of the cost of the original machine on peripheral equipment — see table.

Under the heading of sales forecasts for 1984, Gowling says: "The major constraint facing this industry is the size of the total market available to it."

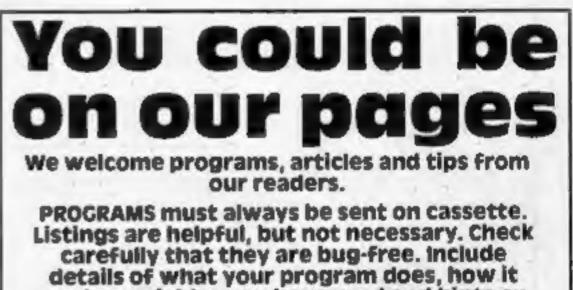
Most micros are owned by families with children and the total number of these in the U.K. ws 32.9 per cent, or about 6.5m. Just over half were aged 10-16. So sales potential could be less than for video recorders and it could be expected to peak before that of videos. Other factors included price. As prices came down demand would obviously increase, but growth for more expensive computers - like the BBC model B and the Commodore 64 --- suggested the market was becoming more discriminating. The relatively high price of these machines could dampen demand. Another factor was the growth in the second-hand market.

Spectrum	% Jan 84 28	totals Jan 84 6000,000	5 Jan 83
ZX81		450,000	43.4
	21		
VIC-20	13	275,000	12.4
BBC B	10	225,000	5.2
Commodore 64	9	200,000	_
Dragon	6	125,000	5.2
Acom Electron	1		
Atari (all)	1		1
Colour/Video Genie	1		t
Laser 2000	1		E
Lynx	1		1
Oric	1		
Sharp (all)	1		3.1
TRS-80	1		1

How many own what — January 1983 compared with January this year. Percentages do not total 100 due to rounding. From Microcomputer End-User Research, by Gowling Marketing Services.

	% of micro owning households with equipment	Approx No. with equipment
joysticks	\$2	1.11m
expansion box	26	55m
printer/plotter	20	.43m
extra RAM	11	.23m
disc drive	10	.21m
synthesiser	9	.19m
EPROM	7	.15m
light pen	7	.15m
graphic tablet	2	.04m
colour card	2	.04m

Ownership of peripherals — from Microcomputer End-User Research, by Gowling Marketing Services.



other computer games on the market."

Mr Stone sees Palace Software operating in two areas: inhouse programs, in the early stages based on films, and publishers of software from freelance programmers.

He believes, however, that the days of the schoolboy programmer working at home are nearly over — unless he is a full-timer with a lot of talent and that future software will be produced by teams.

He also believes that his company is well placed with its links with video and experience of marketing and distribution, for which a separate team is being set up.

A number of video rental shops were now selling computer software, although many had a lot to learn about the market.

Palace Software, 275 Pentonville Rd, London NI 9NL The report, Microcomputer End-User Research, costs £75.

Gowling Marketing Services, Britannia Buildings, Fenwick St, Liverpool L2 7NA

#### works, variables you have used and hints on conversion.

ARTICLES on using home computers should be no longer than 2,000 words. Don't worry about your writing ability — Just try to keep to the style in HCW. Articles most likely to be published will help our readers made better use of their micros by giving useful ideas, possibly with programming examples. We will convert any sketched illustrations into finished artwork.

TIPS are short articles, and brief programming routines which we can put together with others. Your hints can aid other computer users.

#### Competitive rates are paid.

#### Keep a copy of your submissions and include an SAE if you want them returned. Label everything clearly and give a daytime and home phone number if you can.

Paul Liptrot, Home Computing Weekly, No.1 Golden Square, London W1R 3AB

## NEWS

## Parlez-vous French?

Tansoft has just announced Language Masterclass, the first computerised Link-Word foreign language learning system. Claimed to provide the ability to communicate in the learned language in less than 12 hours, Masterclass is aimed at students and British business men travelling abroad.

It is based on the Link Word method developed by Mike Runeberg whereby you link foreign words with similar sounding English words.

Supplied with a program cassette containing a 400 word vocabulary and a grammar tutor, a spoken vocabulary pronunciation cassette and instruction manual, Masterclass costs £12.95 for the Oric 1 and Atmos.

Tansoft Ltd, Units I and 2, Cambridge Technopark, Newmarket Road, Cambridge.

## QL program — already!

Joe the Lion says it is the first with a range of programs for the Sinclair QL.

Spectrum Emulator comes on a Sinclair microdrive cartridge and allows you to load Spectrum machine code programs into the QL. Price: approx £25.

This high price is due to the fact that Microdrive cartridges can only be obtained from Sinclair and that the QL has no cassette port so this has to be provided as well. A similar emulator is also planned for the

## 40 winks with Optima

Latest games to come out of Optima include Bedbug and Omega Probe, both for the BBC computer.

Bedbug is a totally original game — you have to get to sleep. Preventing you is a horde of fleas and bed bugs which you have to combat, armed with only your false teeth and a jam buttie. Omega Probe is more civilised — you have to survive a space mission.

Optima Software, 36 St Peters Gate, Stockport SKI 1HL

## A handful of Shards

Shards has launched six new games. For the Dragon 32 is The Mystery of the Java Star a four-part educational adventure will puzzles, mysteries and information; Shaper, sound utility; and North Sea Oil — a real-life simulation.

For the BBC Model B there is Laser Letters, an educational word game; and Pettigrew's Diary, the BBC version of Shards' Dragon adventure. Empire is an Electron version of the Dragon strategy game. Prices: £5.75-£9.95.

Shards Software, 189 Eton Road, Ilford, Essex IGI 2UQ

# **Cosmic Cable**

Latest programs to be announced by Cable Software are Cosmic Bounce and Nursery Nightmare, both for the CBM

# ONE MAN'S VIEW

# Roaring to my dream of wealth

I rolled down the window of my super-blown red racer and turned to view the glistening array of lights and gauges ahead of me. My fuel tank: full. I reach down and fumble for the ignition key. One turn and the massive engine thunders into life, the hypnotic whirr of the exhause, the rumble from the engine. I knew they would make me easy prey for the deadly Black Turbos.

I turn and a gruesome sight awaits my eyes — a Black Turbo, its exhausts spitting out power. The glowing suns fire their lethal rays which dazzle and sparkle on the Turbo's shiny body shell. A movement catches my eye. The driver, in his leather suit, winks at me and with devilish grace he lowers his visor. Our engines roar and we exchange glances. It is time.

I slam my foot down, almost through the floor. My head is jolted back and the wheeled monster is let loose. Immediately the Turbo snarls to life and makes straight for me. I grasp the cold, sweaty wheel and turn with all my might. He's still behind me. I glance at the control display and a sparkling catches my eye. I press the appropriate button and a cloud of black smoke billows out of my exhaust.

Despite my fear I manage a snigger, but it is cut short by a piercing screech. Again I glance down and wipe my visor.

My scanner shows a small, insignificant point flashing on and off. This small point represents a million dollars, or, if not collected, eight years imprisonment in the much-feared Doomsday Lair. The thought of the lair sends an icy shiver up my spine, so I cool down the speed and punch co-ordinates into the onboard computer. It is time to relax and I sink into the padded leather seat. Victory is within a kilometre's journey. I dream of the wealth that is mine. Soon the mighty machine draws to a halt. I reach for the door handle and step out into this hostile environment. It's there! The idol of my dreams. The great Cup of Ultimate. I climb over the golden sand dune and hold its glistening handles. With dreams in my mind I read the fabled inscription on the side: "TranzAm loading instructions. Connect the ear socket on your Spectrum to the ... " TranzAm — game or reality?

Steve John Bob	MIMMA .
Joe the Lion, 213/215 Market Street, Hyde, Cheshire SK14 1HF	Cable Software, PSL Market- ing, Cape House, 52 Limbury Road, Luton, Beds LU3 2PL
emulator is also planned for the BBC micro.	Nightmare, both for the CBM 64 at £8.75 each.

ohn Bob Paul Your name is on the Death Star.

Paul Mulroy Fallowfield, Manchester

• This space is for you to sound off about the micro scene, to present bouquets, to huri brickbats, or just to share your opinions or experiences. Contributions from individuals earn a fee. Send your views to Paul Liptrot, Editor, Home Computing Weekly, No.1 Golden Square, London W1R 3AB

# Your Best Source of Best Sellers



## SPECTRUM SOFTWARE REVIEWS

#### **Pi-Balled** 66

Automata, 27 Highland Rd. Portsmouth PO4 9DA

Another Automala winner! An extremely addictive Pyramid of Pi game using the Spectrum potential to its fullest, as well as machine code -- with the added speed this gives where needed.

The program, compatible with the Kempston joystick, introduces the characters on the two loading screens, the second animated to include flashing stars of David Is Burt, the star, Jewish, perhaps?

There are blocks on the side of the pyramid, which change colour to match that shown top right, as Burt moves across the side. The two Ball brothers, Bobby and Hills, tra to meserat Bart doing so, assisted by one occasionally

changing into Sid Snake and by Pixel Prince Col who changes the blocks back to the original colour. Burt is helped by Pixel Prince Jas changing blocks to the new colour and by a magic flying disc that allows him to lure Sid off the pyramid.

Scoring is neon-lit at top left, above jumping Burts showing how many lives are left, and is added to by moves, completed pyramids and by leading Sid astray. Unfortunately, I have not, as yet, completed all the 66 possible screens... but there is time yet!

T.W.

playability	999%
graphics value for money	990%

#### The Snowman £6.95

Quicksilva, 13 Palmerston Rd. Southampton SOI ILL

There can be very few people who haven't built, or at least helped to build a snowman. That's what this game, based on a charming book by Raymond Briggs, is all about - building a snowman and dressing if up.

First of the four stages is the actual building by picking up randomly-placed piles of snow and taking them to the site. Although classed as baddies, I found the gas flames enchanting little things, in spite of the fact that they melt your mow. You have to find the ultimate weapon against them - an ice lolly.

Remembering that prizes make points, soo have to gather up all

the goodies you find. One false step and you are floating gently downwards to a thoughtfully provided bed, dead of course.

Other stages require you to collect items to complete your snowman. I'm not going to tell you about that - I don't want to spoil it for you.

A slight bug may frustrate, but not stop, your play: at certain points left or right keypresses don't respond. It's the same for joystick as well, I'm afraid. However, this won't stop anyone under 110 enjoying this delightful game.

	0.B.
instructions	100%
playability	100%
graphics	100%
value for money	100%
* * *	* *

# **Games for** your **Spectrum 1**

# A page of the latest 48K Spectrum games, all given the once-over by our reviewers

#### CCI, Units 2, 3 & 4, Shire Hill Industrial Estate, Saffron Waldon BCII 3AQ

**3D Star Wars** 

Written with Return of the Jedi in mind, you are cast as Luke Clearthinker (!) and - surprise, surprise - you take on the entire rebel fleer single-handed! Fortunately you have at your command one of the most up-todate starfighters, equipped withlong and short-range scanners.

The damage status meter tells you the condition of the ship, and direction indicators show which way you are travelling. Warning neons indicate when the rebels are attacking and there is a large "aliens left" display. Fast and slow travelling proton bombs are available to blast these undesirables.

There are 10 sets of 18 altens to be destroyed, all different in shape and power. The graphic display make this a truly threedimensional mind-blowing game. There are meteorite storms which really do appear to be coming at you. Your proton bombs do seem to be travelling off into the distance. The program uses 700 defined graphics as well as good

Instructions are in the program but appear on screen rather ponderously due to a rather involved teleprint-style format. There is a hall of fame, joystick option, and a hold/start facility.

nstructions	С,
ayability	804
aphics	909
due for money	100%
	90%

#### zaxxan 25.50

Starzone, 74 Wallingford Rd, Shillingford, Oxon

A semi-3D version of the arcade game Scramble. I say semi-3D as only the bottom and left wall of the tunnel are displayed as it scrolls from top right to bottom

left. The idea is that you have to fly

your plane low enough to make strikes on the fuel dumps, radar installations, rockets and planes, but then climb fast enough to avoid the cross walls of varying heights that are forever coming towards you. All this, plus dodging the ground-to-air missiles that are launched at you, makes for a difficult and tense game - especially as the 3D effect makes it very difficult to judge

your exact position relative to the missiles and the gaps in the wall. The shadow of your plane helps - if you can keep your eye on it as well as everything else?

Good use is made of the Spectrum's graphics and sound capability. The only slightly disappointing thing about the game was that the scroll is by character squares, not pixels, making the action rather jerky, But still, a small price to pay for an original angle on an old favourite.

instructions playability graphics value for money



90% 85% 80%

80%

C.B.

#### Laser Zone £6.95

Quicksilva, 13 Palmerston Rd, Southampton SOI 1LL

An unfortunate combination of paper and ink makes reading what's on the screen rather difficult. However, by studying the inlay, you can determine what is supposed to be happening. You have a choice of keyboard, or joystick, individual or team play.

The object is to destroy waves of aliens by manipulating two cannons. One lies at the bottom of the screen, and the other at the right. By using a combination of keys the cannon can be made to fore diagonally, as well as at right angles. This diagonal cross fire could destroy your own cannon, of course, so careful positioning is needed. If any aliens do manage

to land on your plane they will march towards you and can only be destroyed by an electro bolt. You start with three of these bolts, and can collect up to four more. Later assault waves bring "pods", which you cannot destroy. They have a disturbing habit of suddenly exploding, and will destroy your cannons if they are in the path of any fragments.

I found the combination of keys tiring, and got the impression that the action didn't match my efforts on the keyboard. Altogether a disappointing experience.

	8.8
astructions	2015
layability	75%
raphics	75%
alue for money	60%

p

# "ADVENTURES INTO IMAGINATION"

VENTILIDES NEO MAGINATI



# Your Quest: To escape from Scarthorpe!

Scarthorpe is the sort of town where even the dogs carry flick knives! Where there's only one road in, and that's a one way street! The sort of town where rebuilding means a new coat of paint, and where people queue up to queue up for a job! Not many people come to Scarthorpe, and even fewer leave. The church bells chime three in the morning ... the streets are deserted ... now is your chance to Escape from Scarthorpe! 48k Spectrum E6.50

# RICHARD SHEPHERD SOFTWARE

#### ELM HOUSE, 23-25 ELMSHOTT LANE, CIPPENHAM, SLOUGH, BERKS.

All programs are sold subject to the condition that they may not, by way of trade or otherwise, belient, hired out, resold or otherwise circulated without the written permission or Richard Shepherd

# **DRAGON 32 PROGRAM**

# Your chance to hit the jackpot... with no coin slot to feed

Playing the fruit machine in my local almost always left me with little in my pocket but air.

I started thinking that feeding an innocent-looking, but greedy, slot with all the change I could lay hands on was no better than cleaning my shoes.

So I sat at home thinking, and cleaning my shoes due to a lack of money.

I decided that with me being a computer fanatic — as well as a good shoe cleaner — I was going to write my own fruit machine program for my Dragon 32.

This took a little longer to write than I thought — like two weeks longer. But the result, I feel, was worth the wait.

I tried to keep as close to the original as possible in the way that it gambles, nudges and so on.

All the features of the game are given below.

#### Payments

Two matching fruit	
one and two	20p
Three matching fru	
cherries	30p
lemons	50p
apples	50p
plums	70p
pears	100p
bars and melons	£2 jackpot

When you run the program it will spin the first go for you but the rest is up to you and is We reckon this is one of the best fruit machine games for any computer. It was written for the Dragon 32 by a contributor who likes to be known as just Klarzy. All the features of a real machine are included

#### Gamble and collect

When a winning line appears the computer will go to the test screen on which is a list of all possible wins. Arrows will point to the amount you have won, the amount you could win by pressing the enter key and the amount you would collect if you lost the gamble. To collect just press the space bar. The computer will call you a coward and return you to the fruit machine.

#### Nudges

When the computer offers nudges a line will flash up and down on the left of the machine and emit sound. You then press the space bar to collect them. The program uses PMODE 3 and makes the most of the Dragon's colours and graphics. I reckon it's as good as all the commercial programs I've played. Even so, I've left room for improvement, such as random nudges and so on.

**P.S.** I don't spend money on fruit machines any more. I don't know whether this is because of the program or because my girlfriend has become my bank manager...

#### Hints on conversion

Plum's Up uses standard Microsoft BASIC so it will work on the Tandy Colour Computer if the keyboard PEEKs are changed.

20-60 defines variables for jack- pot tune
70 defines variables for the three columns 90, 100, 110 GOSUB
2680, 1880, 2920 120 checks if column one is held
130-296 routine to spin first column 300-420 places chosen fruit in
column one 430 places middle fruit into WBS
440 checks if column two is held 450-610 spinning routine for second column
620-740 places chosen fruit in column two
750 places middle fruit into WCS 760 checks if column three is held 770-930 spinning routine for
column three 940-1060 places chosen fruit into
column three 1970 places middle fruit into WDS
1090 takes 10p from current account
1120 checks if winning line, if so goes to win routine 1130 get nudge routine
1140 sets RH to random number (1-5) used for holding routine
1160 GOTO hold routine 1170 money check if asked for 1180-1200 start routine
1210-1390 winning routine which determines how much won, if
jackpot goes to jackpot routine 1400-1740 gamble and collect
routines. Adds winnings to account and sends you to jackpot routine if you reach

1750-1840 jackpot routine 1860-1870 back to start routine

controlled as follows:	You will be given five nudges and the line shows the number left at any stage. It will adapt to most other computers if the graphics are altered.	1880-2670 drawing routine for fruit 2680-2760 routine to put 20 fruits to each column in corret
To start the reels spinning just press the space bar. Pressing Q before spinning the reels will give you a money check. Holds	1 ************************************	order 2770-2850 routine to put fruit on screen 2860-2910 data for 3 by 20 columns of fruit 2920-3110 draw fruit machine 3120 determines whether to give
When the computer decides to give you the chance to hold any of the three columns the three rectangies below the columns will flash red and sound will be heard from your TV. The hold buttons are 1, 2 and 3, respective to each column, and the zero key will cancel holds.	<pre>6 *** CHURLTON *** 7 '********************************</pre>	hold. If yes, then hold routine 3130-3170 restore all hold vari- ables and go back to hold routine 3180-3330 hold routine 3340-3350 decide whether to give nudges 3360-3440 routine to inform user that nudges are given 3450-3500 display number of nudges left 3510-3580 gets user's move for nudge and sends it to relevant
Auto hold If you are given two holds consecutively then the computer will automatically hold the column/s from the last hold unless changed or cancelled.	110 GOSUB2920 120 IFHB=5THEN440 130 X=40: Y=120:C=0:P=RD:T=0 140 C=C+1 150 T=T+1 160 IFC>107HENG070300 170 A#=B#(P) 100 GOSUR2770	column 3590 check if winning line. If so, then winning routine 3600-3640 goes back to begining of nudge routine if any left, else goes to start routine 3659-3720 money check routine

	JOH JE FROGRAM
198 P=P+1	1130 60103348
2008 1FP/20THEMP=1	1140 RH-RND (5)
218 JEPKITHENP=28	1150 LINE (14,173) - (14,23), PRESET
2.10 Y=Y-50	1168 60703128
230 IFY<20THENY=120	1170 1FINKEYS-"Q" THENGOSUB3658
	1190 IFPEEK(345)<>223THEN1170
240 1FT=3THEN260	1198 SOUND65,2
258 6070148	1200 GOTO120
268 P=P-2	1218 FORD+1T0488:NEXTD
272 T=0	1.220 000
280 [FP<1THENP=20	1.238 PLAY", 5005ACDACEEEEE"
290 GOTO140	1240 FORD=07031:PRINT"+";:NEXTD
300 R=INT(RND(20))	1258 IFW OTHENPRINTO35, "YOU OWE ME "I (W-W-W) I" PENCE"
218 X=48: A=28	1260 (FW>-OTHENPRINTO35, "YOU ARE "IN; "PENCE UP"
320 FORO=R-170R+1	1.278 FORD-BT031+PR1N7"="1+NEXTD
3 VØ P=0	1280 FORD=170400:NEX7
140 IFO(1THENP+20	1.798 FRINT: FORD=200T0100STEP- 58: PRINT"=**"; D; "######"INE
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160 A#+B#(P)	["00 PRINTHOOD"; 70, "00000":PRINT :==="[50; "0000"
378 GUSU82778	1"10 FORD= "0TO1057EP 10 PRINT"**** 10; "######". NEXT
380 Y=Y+50	1 20 (FWDS+WC# THENE 350
190 NEXTD	
400 SOUND60,2	1330 XW-33115=50
410 [FR 20THENR=]	1 40 GUT01400
4 0 IFR ITHENR=20	1 50 IFWR#="CHE" THEN XW#279 5+68
430 WB*=B*(R)rRB=R	1360 [FHE#="LEM" OR WE#="APP" THENXW=267: S=70
440 IF HE -5THEN760	L 70 LEWBERTPLUE THENXWEZTS:5-80
450 [FN=5THEN3590	1300 IFWERPTPEAT THENXWEDDE 5-90
460 X=108: Y=128:C=0:P+RL:T+8	1 90 IF WREATBAR" OR WHEATHELT THEN 1750
4/0 E=E+1:T=T+1	1400 RG=INT(RND(2))
480 A\$=C\$(P)	1410 IF XWALSY THEN GOTO1758
490 IFC -15THEN620	14 0 PRINTEXH,""
	14-0 SOUNDS.1
500 GOSU62770	1440 PRINT#(XW-32)," (;
510 P=P+1	14%8 PRINT@(XW+32)," "E
5.0 IFP>COTHENP+1	1468 [FPEEK(338)=191 THEN1528
SID TEP THENP=20	1478 JEPEER (345)=223 THEN1658
54@ Y=Y-30	1480 50UNDS-10,1
2.40 TEA< SQLMENA=1.50	1498 PRINTECHM+322.5 12
560 JF1="THEN580	1508 FRINTO(XW 52), T Ta
570 GOTD470	1510 GC 7-14 70
580 P=P-2	15.18 JFRG=2THEN1580
598 T=0	1518 PLAY"L 1504ACDCEL 250EL 10E "
6408 JFP LTHENP+28	1548 PRINTE(XN)," "1:PRINTE(XH+32)," ":
610 GOT0470	1558 144-172
6.0 R#JNT (RND (20))	1560 FORD=1T01008
9.20 X=199:A=2.0	15 18 301014/68
648 FOR0=R-1TOR+1	
658 P=0	1588 PLAY*, 160 1640 'POTGO280160 16 *
648 1FQ-17HENP=28	ISPA PRINTERA, " "
678 1FO (2016FNP=1	1600 PRINTERW 12." "
600 A#=C#(P)	1610 PRIN1036+"2,"
690 GUSUR1220	Less (B) THE THE TO BE
1499 Y+Y+50	16 48 FORD=1T0109821NEXT0
7 8 NEXTO	1640 - 50301670
7.28 SOUND 78.2	1550 CL 50: PR1NT#109, "cowerd" (
738 1FR 200THENR#1	1668 PLAY"L401ACL8+EL2C"
ZAG LERCITHENRA 20	1570 LEXH= 163THENN W+10
258 W \$=C\$(R):RC=R	A ARREST F X RECT TITHE NOTE RECT 20
260 1FHD-STHEN1090	1690 1FXW+299THENW+N+30
278 1FN=57HEN3598	1 100 (EXM+ 57 LHENW+W+50
	1 7 1 (0) 2 F X W 11 7 THE NWY W + 7(0)
710 X+172: Y=120: C+0, P+PD: T=0	1.7.0 LE XM#2.015THE NWEW+1000
292 ( +(+1)T=T+1	1.7.50 IF 100-1.71 THE NO. 04 15-0
	1 40 60101650
H10 LFC 15THEN940	, THE FORTELTON

# **DRAGON 32 PROGRAM**

113       113       1144       114       114	HIM INC TOTHENAND		4.007-1707
B 30 PP-1       17.70 FORS=1007005057EP.301X=X.32         B 40 FP 1THE NP=10       17.70 FORS=1007025057EP.301X=X.32         B 70 FP 1THE NP=20       17.60 FORS=1007025057EP.301X=X.32         B 70 FP 2       17.60 FORS=1007005,1         B 70 FP 1THE NP=20       17.60 FORS=1007005,1         B 70 FP 2       18.50 NE X11         9 70 FP 2       18.50 NE X11         9 70 FP 1THE NP=20       18.50 NE X11         9 70 FP 1THE NP=20       18.60 CLS         9 70 FP 1THE NP=20       18.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 1THE NP=20       18.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 1THE NP=20       18.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 1THE NP=20       19.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 1THE NP=1       19.8 FC 5         9 70 FP 2       19.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 2       19.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 2       19.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 2       19.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 2       19.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 2       19.60 FMODE 3, 11 SCREEN1, 80         9 70 FP 2       19.60 FMODE 3, 11 SCREEN1, 80         10 80 FP 20 FME 2       19.60 FMODE 3, 11 SCREEN1, 80         10 80 FP 20 FME 2       19.60 FMODE 3, 11 SCREEN	B.0 GUSU62770		
H40 [FP:>37HENP=1       17.70 FORMSTRING(): 2007 (FP:01X=X:32)         B10 [FP:201HENP=10]       17.70 FORMSTRING(): 201X=X:32         B10 [FP:201HENP=20]       17.70 FORMSTRING(): 201X=X:32         B10 [FP:201HENP=10]       18.70 [FP:201HEN]         B10 [B1:20]       18.70 [FP:201HEN]         B10 [FP:201HENP=20]       18.70 [FP:201HEN]         B10 [FP:201HENP=1]       18.70 [FP:201HEN]         B10 [FP:201HENP=1]       19.70 [FP:201HEN]         B10 [FP:201HENP=20]       19.70 [FP:201HEN]         B10 [FP:201HENP=1]       19.70 [FP:201HEN]         B10 [FP:201HENP=20]       19.70 [FP:201HENP=20]         B10 [FP:201HENP=1]       19.70 [FP:201HENP=20]         B10 [FP:201HENP=20]       19.70 [FP:201HENP=20]         B10 [FP:201HENP=20]       19.70 [FP:201HENP=20]         B10 [FP:201HENP=1]       19.70 [FP:201HENP=20]         B10 [FP:201HENP=1]       19.70 [FP:201HENP=20]     <	BIG P+P+J		
BYB       IPP(INTEX, -         BYB       IPP(INTEX, - <td></td> <td></td> <td></td>			
900 Y=Y=50       1740 SUUNDS,1         970 FY (207HENY=120       1740 SUUNDS,1         970 FF 31HE MARGO       1910 NEXTS         970 FF 2       1930 NEXTT         970 FF 2       1930 NEXTT         971 FF 2       1930 NEXTT         972 K-172 V=20       1930 NEXTT         973 K-172 V=20       1930 NEXTT         970 F=0       1930 PFL (20,70)         970 F=0       1930 PFL (20,7			
B70       EFYC20FHEAVE=120       14000 PKINT0FFT, ***********************************			
8H9       IFT=3THE,N908         8H9       IFT=3THE,N908         8H9       IFT=3THE,N908         8H9       IFT=3THE,N908         8H9       IFT=3THE,N908         9H9       IFT=100         9H9       IFT=100         9H9       IFT=100         9H9       IFT=3THE,N998         9H9       IFT=11H2         9H9       IFT=1002         19H9		1108	PRINTE(X+1)," "a
846       6(110746)       18.30       NE.X11         9706       P=P 2       18.40       F.AY 'XS*, XT\$1, XS*; KT\$, XV\$; X7*; "         9706       P=P 2       18.40       F.AY 'XS*, XT\$1, XS*; KT\$, XV\$; X7*; "         9707       P=0       18.40       F.AY 'XS*, XT\$1, XS*; KU\$; X5*; KT\$, XV\$; X7*; "         9707       P=0       18.40       FMODE 3, 11 SCREEN1, 80         9708       X=172; Y=20       18.40       FMODE 3, 11 SCREEN1, 80         9708       X=172; Y=20       18.40       FMODE 3, 11 SCREEN1, 80         9708       X=172; Y=20       18.40       FMODE 3, 11 SCREEN1, 80         9708       X=172; Y=20       18.40       FMODE 3, 11 SCREEN1, 80         9708       F.O TTRE, NP=16       19.40       FMODE 3, 11         9709       P=0       19.40       FMODE 3, 1       FMODE 3, 1         9701       FO TTRE, NP=18       19.40       FMODE 3, 1       FMODE 3, 1         9701       FO TTRE, NP=28       19.40       FMODE 3, 1		2.010	INE X 1 S
900       P=P       2         910       1=8         9.00       1=8         9.00       1=8         9.00       1=8         9.00       1=8         9.00       1=8         9.00       1=8         9.00       1=8         9.00       1=8         9.00       1=8         9.00       1=10         9.01       1=8         9.02       1=10         9.03       1=12         9.04       R=1NT (RND (201))         9.05       X=172 (V=20         9.06       FUK02R=110R+1         9.07       P=0         9.08       1FO (11KNP=20)         9.09       1FO (11KNP=20)         9.00       10000 As=0x(P)         10000 As=0x(P)       1900         10000 As=0x(P)      <		18.20	I NE X1T
910       1=8       1848       MM**.008         9:0       IFP(ITHENP=T0)       1850       CLS         9:0       DETO790       1850       CLS         940       R=INT(RND(201)       1850       PMODE 3, 12 SCREEN1,0         950       X=172;Y=28       1850       OCLS         950       X=172;Y=28       1850       PMODE 3, 12 SCREEN1,0         950       X=172;Y=28       1850       PMODE 3, 12 SCREEN1,0         950       X=172;Y=28       1850       PMODE 3, 12 SCREEN1,0         951       IFD>20THENP=1       1950       DIFMEL (20,00)         962       IFD>20THENP=1       1968       PMODE 3, 12 SCREEN1,0         970       P=0       1969       DIFMEL (20,00)       1969         980       IFD>20THENP=10       1968       PMODE 3, 12 SCREEN1,0       1970         990       IFD 176,0       1970       PC       1970       1970,0       20,0,0       1970         1030       NEXTO       1968       FORD=1102       1970       1970       1970       1970       1970       1970       1970       1970       1970       1970       1970       1970       1970       1970       1970       1970       1970		10 0	I FLAY "X5#, XT\$1X5#;KU\$;X5#;KT\$, XV\$;X7#;"
9:0       JFP<1THENP=20		1848	I 64 + 64 + 20 <b>0</b>
9:8       EGTD790         948       R=JNT (KND (201)         958       X=J2: Y=20         958       X=J2: Y=20         958       Y=17: Y=20         959       Y=17: Y=20         959       Y=17: Y=20         959       Y=17: Y=20         950       Y=17: Y=20         951       Y=17: Y=20         952       Y=17: Y=20         953       Y=17: Y=20         954       Y=17: Y=20         955       Y=17: Y=20         1020       Y=17: Y=20         1030       NEXTO         1040       SOUND80; Z         1050       IFX: Y=110: Y=17: Y=17: Y=110: Y=17: Y=110: Y=17: Y=110: Y=17: Y=110: Y=17: Y=17: Y=10: Y=110: Y=17: Y=17: Y=10: Y=110: Y=17: Y=10: Y=17: Y=10: Y=17: Y=10: Y=17: Y=10: Y=17: Y=10: Y=17: Y=10:		18%8	I CLS
940       R=INT(RND(20))         950       X=172:Y=70         950       X=172:Y=70         960       FUKQ=TTOR+1         970       P=0         980       1F0>20THENP=1         990       1F0>20THENP=26         1020       CTRCLE(128,90),20,,75         1020       A#=D*(P)         10400       FMDDE 3,1         1020       TTHENP=26         1020       CTRCLE(128,90),20,,75         1020       FMDDE 3,1         1020       THENP=26         1020       FMDDE 3,1         1030       NEXTO         1040       FMDDE 2770         1050       IFR>201HENR*1         1050 <t< td=""><td></td><td>1864</td><td>PMODE 3, 1: SCREEN1, W</td></t<>		1864	PMODE 3, 1: SCREEN1, W
950 X=172:Y=20       1800 FM: CM         960 FUK0=R=1TOR+1       1900 PMODE 3, 1         970 P=0       1900 PMODE 3, 1         1020 As=0s(P)       1910 PC: 5         1020 As=0s(P)       1970 PC=1148(96), 15, 11, .75, 25         1020 As=0s(P)       1970 PAG         1020 NEXTO       1976 FORQ=1102         1030 NEXTO       1976 FORQ=1102         1030 NEXTO       1978 FOR=1102         1040 SOUND90,2       1978 FO=21MENE=5         1050 FFR<20THENR=1		1878	G0701140
Y50 X=1/21Y*20       1899 D1MMEL (20,00)         960 FURGER-1TOR*1       1990 PHMEL (20,00)         970 P=0       1910 Pfc5         980 1F0>20THENP=1       1910 Pfc5         990 1F0 TTHENP=20       1920 CIRCLE(120,90),20,75         1000 As=05(P)       1940 FAINT(118,90),22,4         1010 605082770       1940 FAINT(118,90),22,4         1020 Y=Y+50       1940 FORD=1102         1030 NEXTO       1950 FORD=1102         1040 FFC1THENR=20       1940 FAINT(118,90),22,4         1050 IFR>20THENR*1       1950 FORD=1102         1050 IFR>20THENR*1       1950 FORD=1102         1050 IFR>20THENR*1       1950 IF0=21HENS=0         1060 IFR<20THENR*1		1688	MELON
Y80 FUNCTION*1       1900 PNODE 3, 1         970 P=0       1910 P(.5         980 IF0 ITHENP=20       1920 CIRCLE(120,90), 20,75         1000 As=0s(P)       1920 CIRCLE(110,90), 20,75, 25         1000 IFT=20       1920 FORD=1102         1000 IFT=20       2000 IFT=21HENS=0         1000 IFT=1AND0=1THENS=0       2000 IFT=2AND0=1THENS=0         2020 IFT=10       2020 IFT=1AND0=2THENE=1         1000 IFT=20       2020 IFT=2AND0=2THENE=1         1000 IFT=20       2020 IFT=2AND0=2THENE=1         1100 IFR=10       2020 NEXTO         1100 IFTNENR=1<		1698	D (MMEL (20, 20)
978 prod       1918 PCLS         988 IFD:20THENP=1       1918 PCLS         998 IFD:THENP=28       1928 CIRCLE(128,98),28,,75         1028 As=Ds(P)       1948 FORCE(E(128,98),15,11,75,25         1028 As=Ds(P)       1948 FORCE(E(128,98),15,11,75,25         1028 As=Ds(P)       1948 FORCe(E(128,98),24,15,11,75,25         1028 As=Ds(P)       1948 FORCe(E(128,98),24,15,11,75,25         1028 As=Ds(P)       1948 FORCe(E(128,98),24,15,11,75,25         1029 As=Ds(P)       1948 FORCe(E(128,98),24,15,11,75,25         1030 NEXTO       1948 FORCe(E(128,98),24,15,11,75,25         1030 NEXTO       1948 FORCe(E(128,98),24,15,11,75,25         1048 SOUND80,2       1948 FORCe(E(128,98),24,415)         1049 SOUND80,2       1948 FORCe(E(128,98,110,10,110,110,110,110,110,110,110,110			
986 1F0 20 THE NP=26       1920 CIRCLE (128,98),20,,275         1000 A\$=05 (P)       19-0 CIRCLE (118,98),15,,1,.75,25         1010 GOSUB2770       1940 PAINT TI18,90,2,4         1020 Y=Y+50       1950 FORD=1102         1030 NEXTO       1950 FORD=1102         1030 NEXTO       1950 FORD=1102         1040 SOUND90,2       1970 IF0=2THENS=0         1050 IFR>20 HENR=1       1960 IFT=1HENR=5         1060 IFR>20 HENR=4       1990 IFT=1HENR=25         1070 ND*=D* (R):RD=R       2000 IFT=2THENR=25         1080 IFR>20 HENR=10       2000 IFT=2THENR=.5         1080 IFR>20 HENR=10       2000 IFT=2ANDO=1THENS=.03         2000 IFT=2ANDO=1THENS=.03       2000 IFT=2ANDO=1THENS=.03         2000 IFT=2ANDO=1THENR=.17       2000 IFT=2ANDO=2THENE=.17         1100 IFR       1900 XEXTO       2000 XEXTT         2070 NEXTO       2070 NEXTO       2070 NEXTO			
19 /0 CIRCLE((18,98),15,1,.75,25)         1020 A*=D*(P)         1020 A*=D*(P)         1020 GSUB2770         1020 Y=Y+50         1030 NEXTQ         1030 NEXTQ         1040 SOUNDS0,2         1050 IFR>201HENR*1         1050 IFR         1051 IFR         1052 IFR			
10/20       HARBOR (P)         10/20       GOSUB2770         10/20       Y=Y+50         10/20       IFR>>20+HENR=1         10/20       IFR         10/20			
10/10       1950       # ORD+1102         10/20       Y=Y+50       1950       # ORD+1102         10/30       NEXTO       1950       # ORD+1102         10/30       IFR>201HENR+1       1950       # ORD+11HENR=.5         10/30       MD#=D# (R):RD=R       2000       # # # F=14NDQ=1THENS=.03         10/30       MD#=D# (R):RD=R       20:0       # # # # NS=.03         10/30       IFR>20THENR=10       20:0       # # # NS=.03         10/30       IFR>20THENR=1       20:0       # # # NS=.03         10/30       IFR>20THENR=20       20:0       # # # NS=.03         11/30       IFR<1THENR=20			
1020 Y=Y+50       1968 FORT=1102         1030 NE XT0       1978 1F0=1THE NE=8         1040 SOUND90,2       1978 1F0=2THE NS=0         1050 IFR>20THENR=1       1998 JFT=1THE NR=.5         1050 IFR<1THE NR=20	1010 GOSUB2770		
1030       NEXTO         1040       SOUND60,2         1050       IFR>201HENR*1         1050       IFR         1050       IFN=51HENR=20         1050       IFN=51HEN3590         1050       IFR>20THENR=1         1050       IFR>20THENR=1         1108       IFR>20THENR=1         1109       IFR<17HENR=20	1020 Y=Y+50		
1040       SOUND90,2         1050       IFR>201HENR*1         1060       IFR <ithenr*20< td="">         1070       ND*=D*(R):RD=R         1060       IFN=STHEN3590         1060       IFN=STHEN3590         1060       IFR&gt;20THENR*1         10610       IFR&gt;20THENR*1         1062       IFR&gt;20THENR*1         1106       IFR&gt;20THENR*1         1107       IFR         1108       IFR&gt;20THENR*1         1109       IFR         1120       IFR         1120       IFM8#=MC#THEN1210</ithenr*20<>	LOISO NEXTO		
1050       IFR>20THENR#1         1050       IFR<1THENR=20	1040 50UND60,2		
1060       1FR THE NR=20</td 1070       ND#=D#(R):RD=R         1070       ND#=D#(R):RD=R         1090       IFN=STHEN3590         1090       N=W+10         1091       N=W+10         1092       N=W+10         1103       IFR>20THENR=1         1104       IFR<20THENR=20	LOSO IFR>20THENR#1		
1070       ND#=D#(R):RD=R         1090       IFN=STHEN3590         1090       IFN=STHEN3590         1090       N=W+10         1091       IFR>20THENR=1         1100       IFR<20THENR=20	1060 1FR<1THE NR=20		
1090 IFN=STHEN3590       20.0 1FT=2AND0=1THENS=.03         1090 N=W-10       20.0 1FT=2AND0=2THENE=.2         1100 IFR>20THENR=1       20.0 1FT=LAND0=2THENE=.17         1110 IFR<1THENR=20	1070 WD#=D#(R):RD=R		-
1092 N=W-10       20-0 1F1+1ANDD=2THENE=.2         1102 1FR>20THENR=1       20-0 1F1+1ANDD=2THENE=.2         1110 1FR<1THENR=20	1090 IFN=STHEN3590		
1108 IFR>20THENR=1       2048 IFT=_ANDO#2THENE=_17         1110 IFR<1THENR=20	1072 6=9-10		
1110 IFR(1THENR=20 1120 IFW8#=WC#THEN1210 2050 NEXT7 2070 NEXT0	1108 IFR>20THENR=1		
1128 IFW8#=WC#THEN1210 2060 NEXT? 2070 NEXT0			
2070 NEXTO			
1000 OCTUDO,/D/-(140,110/,/CC			
		+ 10-C940	OC11100//0/-(140/110/)/CC

## **DRAGON 32 PROGRAM**

#### 2090 PCL 5

2100 2110 DIMCHE (20,20) 2120 CIRCLE (128,93), 10, 4: PAINT (128,93), 4,4 2130 CIRCLE(118,106),10,2:PAINT(118,108),4,2:CIRCLE(118 ,109),10,1 2140 CIRCLE (138,103),10,4:PAINT(138,103),4,4:CIRCLE(138 ,103),10,1 2150 COLOR3,1 2160 LINE (110,00) - (118,102) , PSET 2170 LINE(110,98) (133,98), PSETILINE(116,98)-(124,86), P SE L 2180 COLOR4,1 2190 GET(108,78)-(148,128),CHE 2200 PCLS 2210 2220 PCLS 2230 DIMPLU(20,22) 2240 CIRCLE (128,90), 15,3,.75: PAINT (128,98),3,3 2250 CIRCLE(120,80),28,4,.75,8,.15 2250 GET(100,78)+(140,118),PLU 2270 2280 DIMBAR(28,20) 2270 PCL8 2300 COLOR2, LILINE (108,78)-(148,118), PSET, BF 2310 COLOR3,1 2328 DRAN" BH119,68; L8020R8U8L101L101L2R2U1R101R108" 2338 DRAW\*BM123,98; RBU18L 8028; 8; RB; U18\* 2340 DRAW" 84135,98; R8U10L8D20" 2350 LINE(135,98)-(143,108), PBET 2360 COLOR4,1 2370 LINE (108,78)-(148,84), PSET, DF 2360 LINE (108, 112) - (148, 118) , PSET, SF 2390 GET(100,70)-(140,110),8AR 2428 PCLS 2410 1 2420 DIHLER(28,26) 2438 CIRCLE (128,98), 12,2,.75; PAINT (128,98),2,2 2440 CIRCLE(128,98),28,2,.3 2450 GET(108,78)-(148,118),LEM 2468 PCLB 2478 1 2498 DIMAPP(20,20) 2490 CIRCLE(128,98), 15: PAINT(128,98),4,4 2300 COLORI,1 25:0 LINE(128,89)-(144,80),PSET 2520 LINE(120,09)-(115,00),PSET 2530 PAINT(128,87),1,1 2540 COLOR3.1 2550 LINE (128,89) - (135,80) , PSET 2568 COLOR4,1 2370 GET (108,78) - (148,118), APP 2580 PCLS 2590 2680 DIMPEA(20.20) 2610 CIRCLE(128,183), 10, 2: PAINT(128,103), 2, 2 2620 CIRCLE (130,96), 8,2,1.75(PAINT (134,92),2,2 2630 CIRCLE(130,96),0,1,1.75,.70,.80 2640 LINE (130,86) - (135,90) ,PSET 2630 GET(108,78)-(148,118),PEA 2660 PCL8 2678 RETURN 2600 FOR1-1TD50



#### ),PSET, BF

30.20 COLOR4,1 3030 LINE (232,172) - (247,180), PSET, BF 3848 LINE (237,35) - (247,188) , PSET, BF 3050 COLOR3,1 3868 LINE(28,98) - (232,98), PSET 3878 (INE (58, 173) - (78, 181), PSEY, B 3000 LINE(119,173)-(130,181),PSET,B 3090 LINE (102, 173) - (202, 101) , PSET , b 3108 COLOR4,1 3110 RETURN 3128 [FRH)3THEN3188 3138 PAINT (60,177),2,3 3140 PAINT(120,177),2,3 3158 PAINT(192,177),2,3 3168 H8+8:HC+8:HD+8 3178 80701168 3168 FORH=2T04STEP2 3198 AA#=1NKEY# 3208 JFH9=5THENPAINT (68,177),4,3:00T03228 3218 PAINT (68,177),H.3 3228 IFHC+STHENPAINT (128,177),4,3:00T03240 3230 PAINT(128,177),H,3 3240 JFHD+5THENPAINT (192,177),4,3:60703260 3258 PAINT(192,177),H.3 3260 [FAAs="1"THENHB=3 3270 [FAA#="2"THENHC=5 3288 IFAA\*="3"THENHD=5 3298 [FAA#="8"THENH8=8 HC=8:HD=8 3300 [FPEEK (345) + 223THEN [390 3318 [FH=27MENSOUND200,1 3320 NEXTH 3238 00102106 3340 RN-RND(10) 3350 [FRN>3 THEN 1140 3368 N-5 3378 RL -RMD (158) 3388 SOUND100,1 3398 LINE (14,173) + (14,173-RL), PSET

2690 C=I-20	3400 SOUND200,1
2700 D+1-40	3418 LINE (14,173)-(14,173-RL), PRESET
2710 READA#	3428 SOUND158,1
2720 IFI<217HEND+(1)=A#	3438 JFPEEK (345)=223THEN3458
2730 (F1>28 AND 1<41 THENCS(C)=AS	3448 60103378
2740 [FI2407HEND\$(D)=A\$	3458 RS=5
2750 NEXT1	3468 6=150
2760 RETURN	3470 LINE (34, 173) - (14, 173-B), PSET
2770 PMODES, 1: SCREENI, B	3488 FORZERS TO 1 STEP 1
2780 IFA*="HEL" THEN PUT(X,Y)-(X+40,Y+40),HEL	3498 G=(15+(2+2))
2790 IFA#="BAR" THEN PUT(X,Y) - (X+40,Y+40),BAR	
2900 IFA#="LEM" THEN PUT (X, Y) (X+40, Y+40) LEM	3500 LINE(14,173)-(14,173-6),PSET 3510 AA#=1NEEY#
1910 IFA#="CHE" THEN PUT (X, Y)- (X+48, Y+48) .CHE	3528 IFAA#="A"THENR+RB-110010318
2020 IFAF="APP" THEN PUT (X,Y) - (X+40, Y+40) APP	3530 IFAAt="0"THENR=RB+1:0010310
2838 JFA4= "PEA" THEN PUT (X, Y) - (X+48, Y+48) , PEA	3548 IFAAs="9"THENR=RC-1: GOTO638
2840 IFA4="PLU" THEN PUT (X,Y) - (X+48,Y+40) .PLU	3550 IFA41="W"THENR=RC+1; GOTO630
2858 RETURN	3560 IFAAs="D"THENR=RD-1; GOT0950
2868 DATAMEL, CHE, PLU, LEM, CHE, BAR, APP, PEA, PLU, LEM	3578 IFAAs="E"THENR=RD+1:0010950
2870 DATAMEL, CHE, APP, BAR, LEM, PEA, PLU, CHE, MEL, APP	3589 GOTD3510
	3598 LFWBS=WC#THENL210
2880 DATACHE, BAR, PLU, MEL, PEA, APP, CNE, LEM, BAR, PLU	
2878 DATAPEA, CHE, MEL, LEM, CHE, APP, PLU, BAR, CHE, LEM	3600 LINE(14,173)-(14,173-(3), PRESET -610 NEXT2
2900 DATABAR, PEA, PLU, CHE, APP, LEM, CHE, HEL, APP, BAR	
2918 DATACHE, LEM, MEL, APP, PLU, PEA, BAR, CHE, APP, LEM	-6 10 SOUND60,10:SOUND.20,10 16 10 N=0
2920 LINE (20,4) ~ (232,188) , PSET, B	"648 GOTO1142
2930 FORS=173T023STEP 30	-5-40 Ct 9
2940 LINE (8,6) - (20,5), PSET	
2950 NEXTS	3660 PRINTO100, "MONEY CHECK"
2960 LINE (14,173)-(14,23), PRESET	3670 PRINT
2970 PAINT(128,98),2,4	3680 IFW>=0THENPRINT"YOU ARE ": W: "PENCE UP"
2980 LOUGR3, ;	1690 TEM OTHENPRINT YOU OWE HET; (W-W-W); "PENCE"
2990 LINE 32,12) - (222,168) ,PSET, BF	700 FORD=1T01000:NEXTD.CLS
1000 COLOR2,1	3710 PHODES, I: SCREENL, 0
3018 LINE (92, 12) - (96, 168) , PSET, BF:LINE (156, 12) - (168, 168	3726 RETURN

# OF THE MUTANT CAMELS

At last the long awaited sequel to Attack of the Mutant Camels is available. You are controlling a ninety foot high, neutronium shielded, lazer spitting death camel; leading a rebellion against your evil Zzyaxian overlords. The game features beautiful smooth acrolling graphics and no less than 42 different attack waves, more than any game in video history. The challenge of play will last for months, as you battle to see what's on the next wave.

P



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NOTE: THIS IS ONLY A SMALL SELECTION OF THE MANY COMPATIBLE GAMES

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# SOFTWARE REVIEWS

#### **Missile Control BBC £9.95**

Gemini, 18a Littleham Rd. Exmouth, Devon

Another version of the classic Missile Command, but a very good one. It's loud and flashy, using the BBC's graphics excellently and giving a very attractive and exciting game. Play is heatic and can be controlled by keyboard or joystick with options for up to four players. The game features three missile bases, six cities, bombers and smart missiles with bonus citles for every 5,000 points. High scores are recorded but no table is given, you are simply to diyour position

Although the programmer has tried hard to imitate the arcade original and to stretch the graphics to their limits I found

one or two of the displays too harsh on the eyes. And I would have liked an option to switch off the deafening sound. I disliked the way it plays Congratulations if you score enough to have your score recorded. I suppose there may be someone who likes the tune!

The best version I have played at a price obviously chosen to match Acomsoft's equivalent it would be nice, however, if someone could improve on the theme. rather than producing yet another N.W. version.

80%

90%

950%

85.5

ь,

Instructions	
case of use	
display	
value for money	

\*\*\*\*

#### **Rat Splat** 48K Oric £7.95

Tansoff, Units 1 & 2, Cambridge Techno-Park, Newmarket Road. Cambridge.

You'll need a strong stomach to play this And a peg for your nose might come in useful. The action is set in rat infested sewers into which you descend and set sunking cheese bait. Rats come squeaking and swarming in from all sides and you have to splat them with your hammer.

However there are two prob lems. Firstly there is a monster who has befriended the rats and attempts to defend them Secondly the stench of the cheese builds up and eventually will overcome you. You can beat off the monster with an aerosol can but you have to work fast and

splat enough rats before you fant.

The action is pretty furious and requires skilful keyboard operation. One feature I liked was the facility to allow you to select any control keys. Good sound effects were backed up by a nicely prepared, colourful display. There is only one basic screen display but different levels can be reached where bonus cheeses are set.

If you think you can face up to the revolung rodents and like a good up and down ladder chase. Rat Splat is the game for you P 5.W

mstructions	9
piavab hity	8
graphics	9
value for money	7

# arcade action star-rated

# Five new arcade-style games for a selection of micros are put through their paces

# Chuckle Egg Dragon 32 £7.90

A & F. Unit 8, Canal Side In dustrial Estate, Woodbine St.

Generally it's true that games converted for another computer are never as good as the original Many are just quick conversions which get the program just running on the new computer without giving any thought to fully using the capabilities of the new computer. Thankfully, in this case, it is not true, A & F has produced an excellent, at least as good variant, of its Spectrum

You must rescue the dozen ergs around the screen climbing up and down ladders, jumping gaps

and huching rides on the lifts This must all be done while keeping clear of the hens and watching your time. If you take too long the duck will be let out of the cage and your hopes of success

I managed six full screens of action, all different in layout though the principle remains the same The sevench seems weil aigh impossible

Despite the lack of variety, the game features quality graphics, multi-player options and you can redefine the keys. Altogether, a most enjoyable game

muructions	s du,
piayability	60%
Kraph. c	80%
value for money	8595
S 25 mm	854%

See-Saw Scramble Atari £9.99 Romsk, 272 Argyll Ave, Slough, Berks

Padde deflectors moved horizontaily by joystick are provided at the top and bottom of screen in this one- or two player game The paddles are used to deflect

richocheting discs toward a forcefield composed of while hash characters This runs horizontally across screen centre and is bound on either side of its length by

dotted lines if a player succeeds in pro-

peiling his disc through a gap in the dotted line, he will score points for every hash the disc obliterates inside the force-field.

A section is coloured blue. should the disc make contact with that part a whithing blade will be released if destroyed by using your paddle cannon, bonus points will result

There are four levels of dif ficulty, mostly related to speed. Five lives are allowed See-Saw Scramble takes us back to the eraof paddic games. A brave if some what unlikely move. The graphics are rather limited Nevertheless, the game can be fun for two to play But only just

Instructions playability graphics value for money

60\*\* 55% 60%

60%

### **Eagle Empire** 32K BBC £7.95

Alligata, 178 West St. Sheffield 51 4LT

Another version of the birds flying at you while you try to shoot-them game and, to be truthful, I'm getting rather tired of them. This one features three screens. The first is the swarm, the second, eggs and caples --- which carry on flying even after you have shot both wings off - and the third is the master alien. You have left right, fire and shield keys.

The game has plenty of action and good graphics, but there are no real surprises. One major criticism is about the ordering of screens and levels. This is fully

explained on the may, but s il ogical it seems that only allowing a single shot on the screen at a time makes a game more difficult than allowing any number of them. But here the order is reversed so you have first to survive an attack with only one. shot at a time them the next screen. anows you several it may be that this is done for a reason. If so, please explain it to me if not, then it is both illogical and undestrable D.C

90% **เกรโกยต์เอก**ุร 70% playability 80% graphics 70% value for money



# 

Enjoy the hilarious antics of the Comical Mouse as he overcomes all dangers to win the heart of the lovely princess by collecting her lost diamonds. He must climb ladders, slide down the chutes, use transporters and trampolines to jump across divides to escape and outwit his pursuers. Six screens with three levels of difficulty.

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## COMPETITION

Your comrades are held captive behind enemy lines... and they are relying on you and your Jetcopter to bring them to safety.

That's the challenge in Blue Thunder, from Richard Wilcox Software, which runs on the 46K Spectrum and any Atari. And you could win the game in this week's spot the difference competition

We've got £1,000-worth to give away

The Spectrum version costs £5.95 and the version for the Atari is £9.95 So there will be between 100 and 168 winners, depending on how many users of each computer are among the winners.

Richard W loox is named after its 15-year-old proprietor, a fifthformer who wrote Blue Thunder with a friend, Trevor Perks, 16.

Richard is, however, being helped by his brother Steve, a computer retailer, and father Brian, who runs a business software company.

His aim, he says, is to produce a small number of high quality games each year. A Commodore 64 version of Blue Thunder is due out in April

As he is studying for 'O'-levels, the next title will be in early autumn — after the summer holidays Blue Thunder, written in 100 per cent machine code, challenges you to pilot your Jetcopter through electronic storms, ground- and scabased missiles, armoured barrage balloons and deadly jet fighters. Your only defence is a set of hyperphase lasers.

And, as if that wasn't enough, you must destroy an unstable nuclear reactor before you can rescue your captive contrades.

There are five different missions, on-screen scoring and a high-score feature. Blue Thunder works with keyboard or joystick.

# Win... and face the challenge of Blue Thunder from

#### How to enter

Study the two cartoons below and try to find all the differences.

Mark the differences on cartoon B by circling them with a ballpoint pen and then fill in your name, full address, the words Spectrum or Atari, depending on which computer you have got, and give the number of differences you found

Seal the marked drawing and the coupon in an envelope and write clearly on the back of the envelope the number of differences you found

Post your entry to Richard Wilcox Software competition, Home Computing Weekly, No. 1 Golden Square, London W1R 3AB Entries close at first post on Friday March 23.

You may enter as many times as you with, but all entries must be on the official coupon and cartoon, copies will not be accepted The winners will be the senders of the first 100-168 correct entries opened until the value of prizes equals £1,000. In judging no distinction will be made between the owners of the two computers. The solution and the names of the winners will appear in Home Computing Weekly and the prizes will arrive from Richard Wilcox Software within 28 days of the publication of that issue

Important: please follow these guidelines carefully. Incomplete entries cannot be accepted

#### The rules

Closing date is Friday March 23, 1984.

Correct entries will be drawn at random, regardless of computer named, until the value of the prizes equals approximately £1,000. The number of prizes awarded will be between 100 and 168

Entries must be fully completed — including the number of differences written on the back of the envelope — and on the official coupon and cartoon, not copies

Entries will not be accepted from employees of Argus Specialist Publications, Richard Wilcox Software and Alabaster Passmore & Sons. This restriction also applies to employees' families and agents of the companies.

	Richard Wilcox Software Competition
	Entry Coupon
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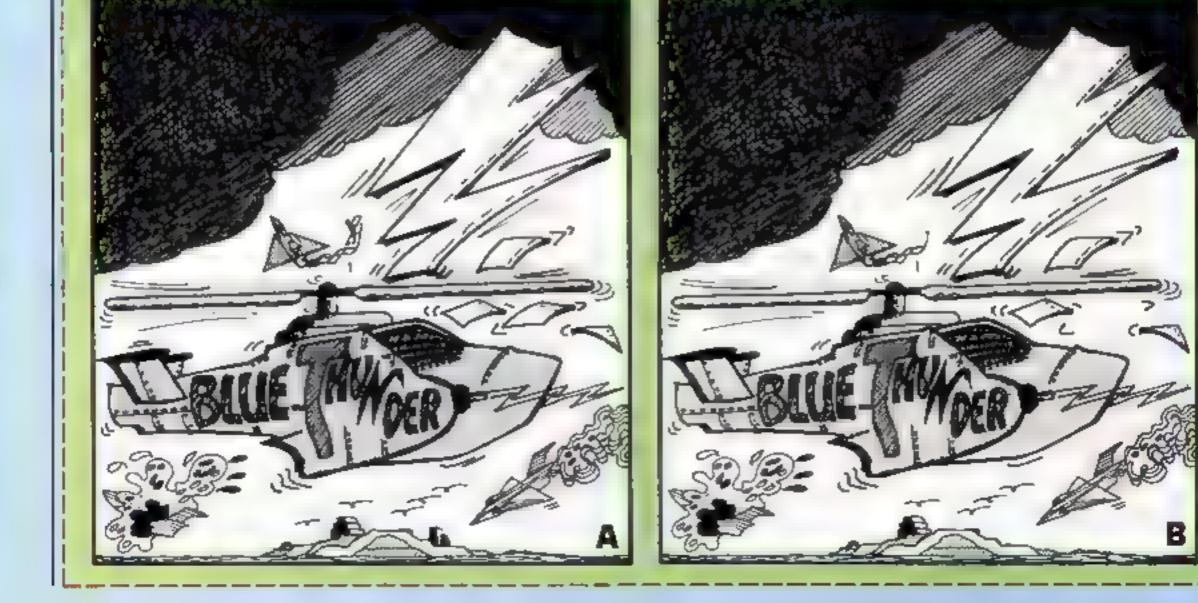
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#### Number of differences found:

Complete clearly: if you tre 6 winner this will act as a label for your prize. Post to Richard Wilcoa. Software Competition, Home Computing Weekly, No. 1 Golden Square, London WIR 3AB. Closing date March 33. Follow carefully the How to enter socilon.



## SPECTRUM PROCRAMMING

#### How it works

- 140 protects the machine code from NEW, which is a quick way of getting rid of the BASIC loader
- 150-840 moves the DRAW. PLOT and PIXEL-ADD subroutines from ROM to RAM
- 900-940 alters the sub-routines as necessary
- 1000-1040 transfers the pseudoscreen to the real screen
- 2000-2040 tests to see that all the DATA has been correctly POKEd
- 4000-6000 demo program Delete before using program above for your own DRAWings

Type in and RUN my program for the 48K Spectrum. Nothing will happen for about a minute and the demonstration routine will produce a smoothly rotating pyramid

And you can draw many other shapes and animate them.

The program is a variation of the DRAW command. However, instead of DRAWing lines on the visible screen, it DRAWs them on an invisible pseudo screen. located higher up in memory.

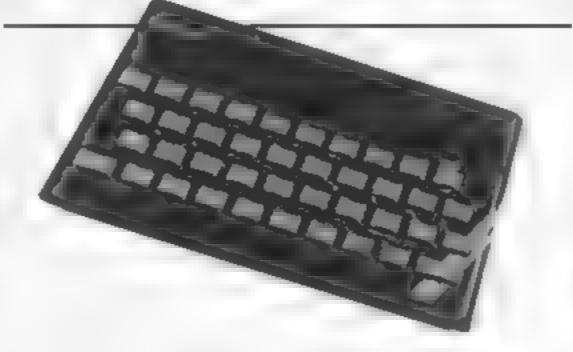
When as many lines as are desired have been DRAWN on this pseudo acreen, it is then copied to the real screen more or less instantaneously.

A new set of lines — a different picture, perhaps a new frame in an animation sequence --- can then be computed invisibly and displayed when ready.

It works by copying various subroutines from ROM into RAM where they are altered to

# Invisible screen to make moving pictures easier

Create your own on-screen animation with Ian McDonald's program for the 48K Spectrum. Are you the next Walt Disney?



fool the computer into thinking that the screen RAM starts at decimal 56382 instead of 16384. Here's how to use it

When lines 140-2040 have been entered and RUN successfully, delete all the now unnecessary BASIC, either line-by-line or by typing NEW.

You have to know the coordinates of each end of the line you want to DRAW.

You can only DRAW straight bnes -- circles and arcs aren't possible.

For each line six POKEs are necessary. To draw a line from (a,b) to (c,d) type

POKE 65011.a POKE 65015.b POKE 65017, ABS(c - a) POKE 65018, AB5(d - b) POKE 65020, SGN(c - a) POKE 65021.SGN(d - b)

ABS is on key G and SGN is on key F.

RANDOMISE USR 65000 will DRAW the line on the pseudo screen. Nothing will appear on the real screen until you enter RANDOMISE USR 64900.

You can store as many lines as you like on the pseudo screen

#### Hints on conversion

Restricted to the Spectrum because it uses the Spectrum ROM. Would probably fit on a 16K Spectrum, but many of the machine code jumps would need recalculating Tricky. And the pseudo screen uses up 6K of RAM

PD-2 40

100 CM

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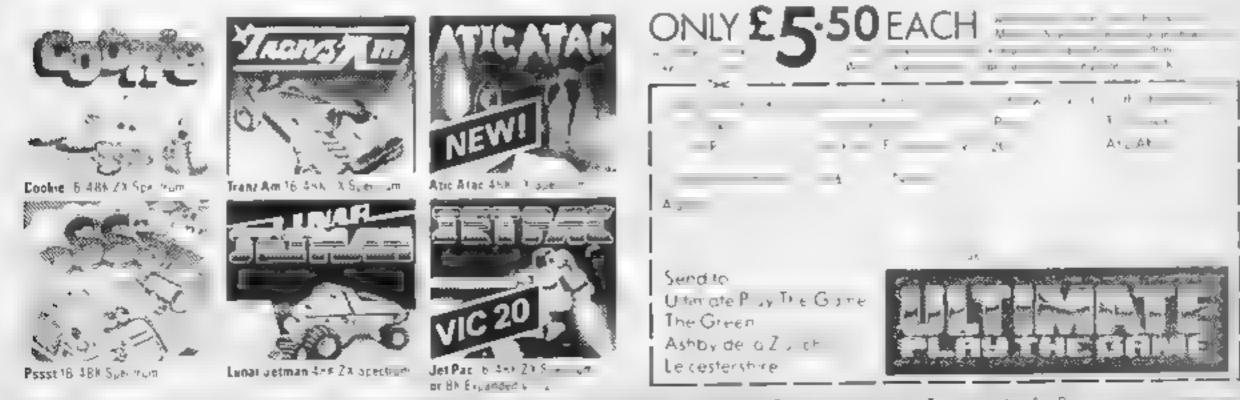
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Page 20 HOME COMPUTING WEFKLY 6 March 1984

# SOFTWARE REVIEWS

**Out of this** world...

## ... or are they earth-bound? Five arcade-style space games are put through their paces

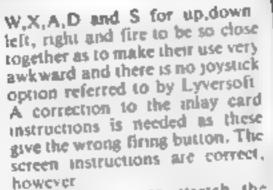


Lyversoft, 66 Lime St, Liverpool L1 IJN

You command a gunsight on a spacecraft and the objective is to amass points by shooting down priate craft when they attack

Following an attractively laid out instruction sequence, the screen represents the view through the crosswires of the sight and you simply try to line up the centre with the attacking forces and blast away. Really that's all there is to the game. The altens loom up quite convincingly "3D" style and if you miss them

they never miss you I found the control key chosen



Not a game to stretch the imagination, though if you want to develop manual desterity you may like the game One I shall quickly forget

D.J	
65% 60% 10082 40%	instructions playability graphics value for money
	***

Demon Raider TI-99/4A £5.50

#### Harmansoft

A rather disappointing photocopied inlay bearing the name and a small diustration, together with instructions (printed upsidedown1), confirmed my suspicions that this was another game based arund an over-used idea

The "battle", if it can be called that, starts in the outer base, inside the martian moon, with your spacecraft making an unimpressive entrance to the cavern

from the lop At the bottom are about 40 power modules, with guns on a hill at either side. Scattered around are demi-mines, separated from the power modules by a force field, running from one hill top to the other



Confirmed space invader addrets will enjoy this, with its excellent last-moving graphicy I found it very difficult to fight my way far enough into the game to review all available levels. Even then I tailed to desiros the base

Good 3D screen effects and enough wreen changes to main lam interest. The main object is to destroy the enemy base Your spacecraft bas to destroy, or douge squadrons of android crair and thread a path through asteroid beits. Points are siven I ir craft destroyed and for each screen salely negotiated A player

Using the arrow keys, you move around firing your laser (which looks nothing like a laser) at the force field. When a hole has been made you can blast the power modules. Only after each shot do the aliens make a feeble attempt to destroy you. After the aliens have launched a missile, you have no control over your spacecraft and are unable to move from its path.

If you are destroyed, the computer checkily and insultingly

displays 'Too tough for you hain, What a joke' Overall, a pretty poor game, relying too heavily on luck as opposed to skill

	9540
mstructions	25%
playability	65%
eranhiC <sup>1</sup>	20%
value for money	



is tempted to stay still and fight but unless you tearn to shoot straight and dodge asteroids, energy levels soon fail

The space-hip is protected by an energy shield and can artack with photon charges and a limited number of smart bombs. However the ship also has a limited amount of energy which is gankly depleted by colusions There are freeze action and hiscore facilities and players have the option of jovelick or key board control

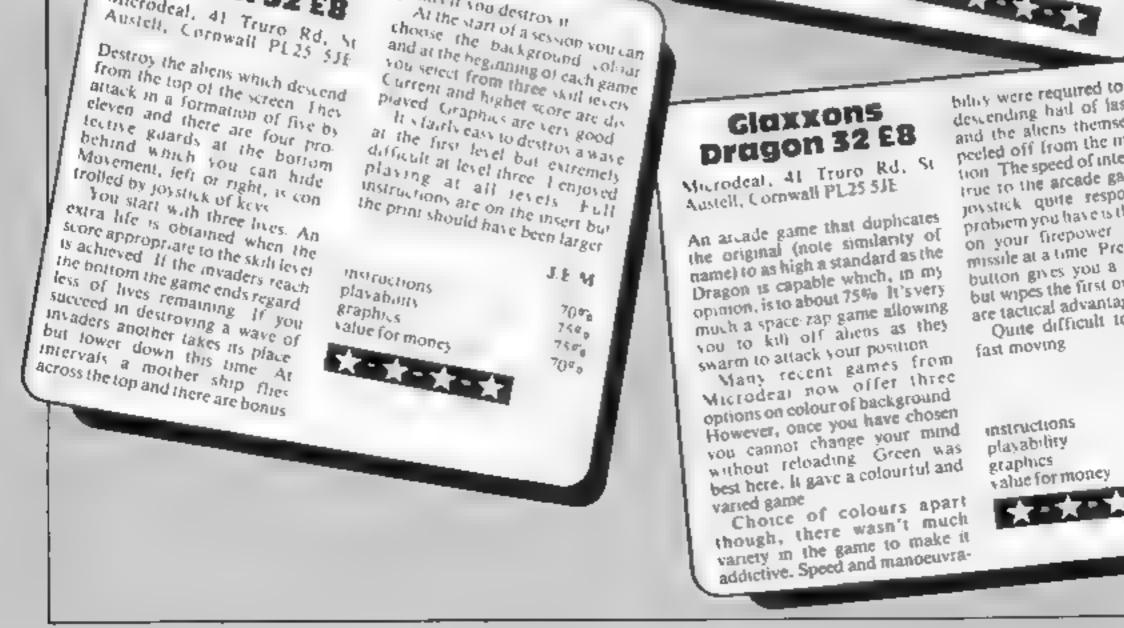
An excelent game with very clear on screen instructions

Distructions	<i>J</i> .H D,
staphing	100%
alue for money	80% 85%
A Station	80%

Dragon 32 £8 Microdeal, 41 Truro Rd, St

**Space Raiders** 

points if you destroy it At the start of a session you can



billity were required to dodge the descending had of laser missiles and the aliens themselves which peeled off from the main forma tion. The speed of interaction was true to the arcade game and the joystick quite responsive One problem you have is the imitation on your firepower - only one missile at a time. Pressing the fire button gives you a fresh missue but wipes the first one out. There are tactical advantages to this Quite difficult to play as it's

M.P. 100% 80% 90%

70%

## SPECTRUM SOFTWARE REVIEWS

# **Games** for your **Spectrum 2**

## A second page of software reviews for the 48K Spectrum. **Read before you buy**

### **Bear Bovver** £6.95

Artic, Main St. Brandesburton, Driffield YO25 8RL

You've probably seen colour adverts with a bear standing on a ladder and waving. Here's what it's about.

You are Ted, who must clumb ladders and platforms to get batteries for your new electric truck You are pursued by Boyver Bears and a "Special Mystery Quest"! When Ted has collected all the batteries on one screen, he drives to the next, more challeng ing stage. There are two skill levels' "Baby Bear Mode" and "Big Bear Mode."

There are tunes and detail and animation are superb, cartoonstyle, flicker-free and extremely

Loony Zoo

£5.95

reaustic The "attract screens between games are even better than the game uself -- the best i have seen for any game on any machine. There is a beautiful picture of Ted and several screen in large, rounded letters For example, one offers four volume leves from "shh" to "unBEAR able" and informing us we could press 5 to "PAWS

Instructions are brief and to the point, without revealing the many

susprises Bear Boyver should become a classic, like Arcadia, Jet Pac, Manic Miner and The Hobbit It is a credit to the Spectrum. M.T.

	95%
Instructions	95.6%
playability	95%
graphics	95%
value for money	2344
44144	And in case of the local division of the loc



## Dinky Digger \$6.95

Postern, PO Box 2, Andoversford, Chellenham GL 54 5SW

Postern certainly won't trouble the Advertising Standards Authority the program is billed. as "fast, furnous and as mean as they come " It is, in fact, too fast, too furious and too mean"

The object is to clear the playing area of cherries and monsters - a feat I have never achieved You have a crystal built to throw at the monsters, but this may not always seturn immediately, so make sure every throw counts

This sounds casy, I can assure you it isn't. You see, the monsters can move twice as fast and head for you along the passage you've Just dug!

## Monkey Bizness £6.95

Arric, Main St. Brandesburton, Driffield YO25 8RL

King Kong walks - or throws things - again to ensure you cannot rescue the princess from the top of a scaffolding structure To reach her you climb ladders while avoiding the burning barrels thrown by Kong They can only be smashed by hammers found on the way up Unfortun ately they prevent you from climbing ladders and jumping barrels, and can only smash an unspecified number. When hit you lose one of your four lives. and umbrellas can be used to

Jump safely to earth When you teach the top of the first screen, the second starts as straightforward as the last But

The graphics are nothing to write home about, only userdefined graphics. An awful offkey tune, played before each life, nearly drove me mad Instructions were adequate: there's not much to write about such a simple game. I had some difficulty loading - it loads at a different volume level from all my other programs

Dinky Digger is not original, but this is the only Spectrum version I have seen. You might like to add it to your program. collection, but to ment's run of the mul

M.T.

	95%
Instructions	45%
playability	50%
eraphics	40%
value for money	
1 MP M V V V	



the following six become more difficult, with states to be Jumped, long Jumps, flying barrels, showering barrels, disap pearing and reappearing barrels and finally a requirement to knock out seven weak points in the scaffolding

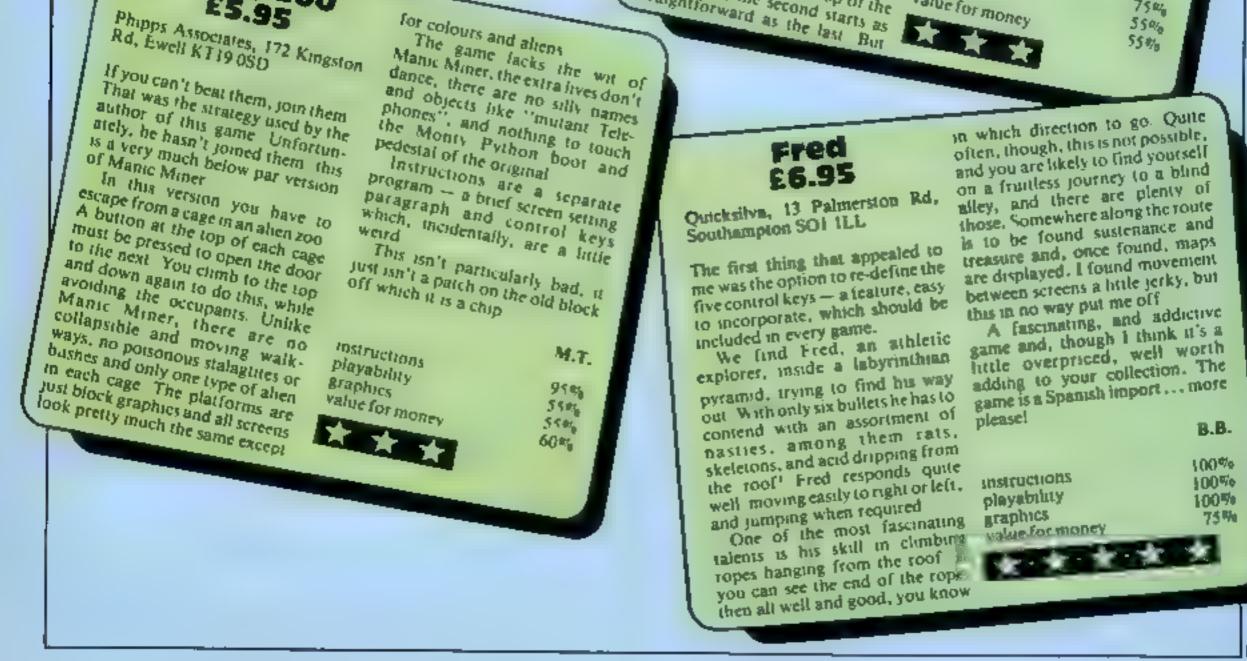
There is no hall of fame, the

level numbers do not appear on screen and Kong looks like a Teddy Beart Barrels smashed and levels completed add to the dis

This reasonably addictive game has not used the sound potential beyond "beeps" and "boops" and the graphics are only at

instructions	Т. ң.
TRohus-	8.50%
alue for money	750% 550%
	55 1/1

for colours and aliens The game lacks the wit of Manic Miner, the extra lives don't



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# SPECTRUM PROGRAM

#### How it works

1-25 set up user-defined graphics. print instructions, screen colours, define variables 30-40 suput difficulty level 50-180 main loop: prints cars, checks for movement, gears and crashes; prints scores and lives. Prints scenery and track 1000-1020 print opposing car 2000-2010 oil oatch 2050-2060 log 2200-2300 road narrows 3000-3020 road works 3500-3700 re-fuei car 4000-4020 night draving 4500-5070 high score routine 8000-8030 crash routine 9000-9020 data

Monaco GP is for all those people who think they can win behind the wheel of a grand prix racing car.

' Choose one of the nine skill levels and the game starts at once, with the trees and the track scrolling past

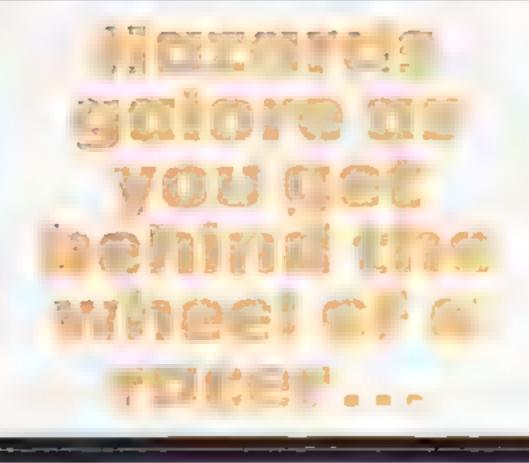
Opposing cars start to appear, moving faster depending on the gear you have selected.

The drivers are very intelligent and lock onto your last coordinate, so you are dodging all the time.

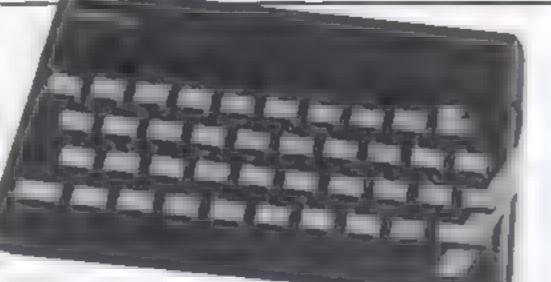
Once you have finished driving through the night other obstacles appear — 3D logs, oil patches, road works, narrow roads, fuel depots and so on.

You steadily gain points and more are added as you pass each obstacle safely. Score and lives remaining are shown at the top of the track

After a while you will need to



Test your skill in the Monaco GP, Neil Hewitt's fast-moving game for the Spectrum. As well as the obstacles, there are other drivers on your tail



refuel, so you must go through the fuel depots. If you do this safely you also gain extra points. If you don't then all your lives are lost.

There is a high-score table for the three best, which can easily be extended to more.

My game runs fast and will test your reflexes to the utmost. The beep in line \$1, which gives a continuous sound, slows it down slightly.

To make the game trickler you could try playing it with just one life.

I think the graphics and the cars are very lifelike and the scrolling is fairly smooth.

The capital letters in quotation marks are user-defined graphics and should be entered in GRAPHICS mode.

This is what they represent. A-F, car, G, tree; H-K, oil, M-V, log

Note: there should be a "greater than" symbol in line 3515 after IF

#### Variables s.y co-ordinates of car h1, h2, h3 high scores s score a difficulty level nS name string a5 title sir ngs li number of lives stir attribute number — this changes for driving in the dark i how far down the opposing car is printed a tells computer when to print a car d j control variables

1 FOR f=USR "a" TO USR "u"+7: READ at POKE f,at NEXT
f
2 CLS 1 PRINT AT 17,15; INK 2; "AB";AT 18,15; INK 2;"
CD";AT 17,15; INK 2; "EF"
3 LET at=" \*ffMONACO BPfff Melcome t
o the race track.You the
driver of your BP car must follow the course missing

B3 IF ATTR (13,\*)=attr THEN GO TO 8008 90 IF #=11 OR #=22 THEN GO TO 8000 91 IF #=2 OR #=4 OR #=6 OR #=8 THEN PRINT AT 28,0;"G G B B G G 92 IF #=2 OR #=4 OR #=6 DR #=8 THEN PRINT AT 28,23;" G B B B B

100 LET V=USR 3280 Objects sugationOP,HI 110 PLOT 100,8: DRAW 0,8: PLDT 180,8: DRAW 0,8: FLASH QRSTU JK . You will also have to dri ß ve through the night, wis 115 IF 114-9 THEN GO TO 4508 a roadworks and watch for the road narrowing.At interva 116 LET ama+1 Is you will also have to 117 IF INFEYS="1" THEN LET I=IB: BEEP .B1.3 fill your car up with petrol. The score is shown on the 118 IF INVEYS="2" THEN LET 1=17: BEEP .B1." left and the number of 1: 119 JF INFEYS="3" THEN LET LEIGE BUCP .01.7 128 IF INKEYS="4" THEN LET 1-15: DEEP .01." ves remaining is shown on the right.CONTROLS:>S<>LEFT / 8()R]GHT.Keys 1.2.3 AND 4 125 JF AND THEN GO TO 1000 are the keys for the gears on your car.GOOD LUCK'' '' 175 JF \$=20 OR ==200 THEN GO TO 3000 1"6 IF == 148 OR == 50 THEN GO TO 2000 4 PRINT AT B.0;: FOR 4=1 TO LEN as: PRINT as(f):: PE EP .01, RND+60: BEEP .01, R 117 IF 5=70 DR ==10 THEN LET 1=8: 00 TO 2050 ND+60+31 NEXT # 133 IF 1490 THEN GO TO 4988 5 LET h1=40: LET h2=80: LET h3=140 148 IF ##168 THEN GD TO 2208 6 LET 1=19 150 LF SPLID THEN GO TO 3500 7 FOR #=- 30 TO 50: BEEP .01.f: BEEP .01.f+3: REEP .0 160 IF set THEN GO TO 4000 L.F+6: NEXT # 170 LET 8=\$+.5 A FOR 4=0 TO 21: PAPER 0: INK 7: RORDER 0: RANDOMIZE 160 GO TO 50 USR 3288: NEXT 4 1000 PRINT AT L.K: INK 4:" AB": AT 1+1.8: INK 4:" CD"; AT 7 LET ==0: LET d=0: LET d=0: LET attr=60: PAPER 0: 1 1+2,x; INK 4;" EF" NK 7: BORDER 0 1001 PRINT AT 20,0:"6 6 6 6 6" 25 LET LIFT LET X=16: LET Y=10: LET #=0 1002 PRINT AT 20,23; "6 6 6 6 6" 15-EASY ' 30 INPUT "LEVEL OF DIFFICULTY (6 15) 10.0 LET a=0 6=MARD!!":ut 1070 GO TO 50 40 IF u<6 OR u>15 THEN GO TO 30 2008 PRINT AT 19,16; INF 4:"HI" 50 PRINT AT Y,x; INK Z;" AB ": PRINT AT Y+1,x; INK 2; 2001 PRINT AT 20,16; INK 4: "JK" " CD ": PRINT AT y+2,x; 1 7002 LET 6\*5+5 NK 2;" EF " P818 60 TO 58 AD PRINT AT y-1,x;" 2050 PRINT AT 19,17; INK 4;"LHNOP": PRINT AT 20,17; INK 70 PRINT AT 0,12(5;AT 0,17; "1)111 ( TO L) 41 "ORSTU" 80 FEL X=X+(1WFEA\*=.8.)-(1MFEA\*=.2.) 2068 LET s=c+10: 60 TO 50 B1 BEEP .01,174 2280 INK 2: PLOT 120,8: DRAW 8,175: PLOT 168,0: DRAW 8,

## SPECTRUM PROGRAM

175: INK B 2301 1F x 13 OR x 19 THEN GO TO 8808 2202 LET d=d+1: 1F d=u+3 THEN LET s=s+20 2 400 BD TO 50 1000 INK 41 PLOT 100,10: DRAW -50,10: DRAW 5,20: DRAW 5 5,81 INK 8 3010 PRINT AT 17,16; FLASH L, BRIGHT 1; "ROAD", AT 18,28; FLASH () BRIGHT 1: "UP" 3020 LET 5=5+5: GO TO 50 3500 PLDT 140,0: DRAW 0,20: PLOT 160,0: DRAW 0,20 3518 IF J-1 THEN PRINT AT 18,18; "F"; AT 19,18; "U"] AT 20 ,18; "E"; AT 21,18; "L" 3515 IF J=5 THEN 60 TO 3528 1517 GD TO 1518 1528 IF > =15 OF + =18 THEN LET 11=8: 60 TO 7568 3510 LET 1=,+1: IF 1=70 THEN LET SES+10: 1ET 1+01 LET 11-11+1 3550 LET 4=2 3568 60 10 58 4000 IF JORG THEN LET Attre4 402) IF J-30 THEN PAPER 0; INK 7 49002 LEC 1 1+15 4009 IF 2=10 THEN LET ALL:460 4010 IF 1=30 THEN LET ess+10 4811 IF J= 30 THEN PAPER 7: INK B1 BORDER 7 48.8 GO TE 50 4500 JF & h1 THEN GO TO 5040 4501 PAPER 71 BORDER 7: INK B 45:8 CLS : LET a#="Welldone you have attained a new high score. Please enter your name for next years GP \_\_\_\_\_\_\_\_ 45.1 PRINT AT 18,8:: FOR 1+1 TO LEN ADD BEEP .01,RND+38 +3 PRINT INK RND+6; FLA SH (TARCE) IN NEXT & 4520 PLKE 23658,8: INPUT n#, PONE 23658,8 5002 IF sohi AND sch2 THEN LET hims 5003 IF why AND & by THEN LET 5244 5004 IF whis THEN LET DISH "WIN CLS : PRINT AT 0,10; "HIGH SCORE TABLE": PRINT AT 5 .18:"1)",h1:AT 18,19:"2)" ,62;A1 15,10,7317,61 SWID IF h2=\* THEN PRINT AT 10,23104 5021 IF hims THEN PRINT AT 15,2511\$ 50.2 IF h3%s THEN PRINT AT 5,23,04 58 V8 FOR F-8 TO 600; NEKT F 5848 CLS : PRINT AT 18,18; INK RND+6; FLASH 1; TANOTHER GAME " | BEEP .1,15 SOND IF INKEYS-"" THEN BO TO 5848 NUMB IF INFERTATIVE OR IMPEYSATY FREN GO TO 5 5078 STOP 8000 FOR 4-8 TO 1001 16, 18, DUT 16, 18, NEXT 4 BOID FOR FOR TO TO THE BEEP BL, FI BEEP . BL, FAS BEEP BL, F#2s NEXT F 0011 FOR F=30 TO 0 STEP 1: BEEP .01, F+5: BEEP .01, -F: BEEP OI, 1: NEXT F 8015 LF1 x+15: CL9 BAUD LET ANDE LET ISHIS 1 80 0 60 10 50 9000 DATA 255,248,51,7,227,239,235,248 9001 DATA 255,15,248,224,199,247,215,71 9802 DA1A 233,233,232,12,15,12,7,7 9883 DATA (51,151,25,48,248,48,224,224 9804 DATA 1,99,97,111,120,111,96,96 9005 DATA 192,198,134,246,38,246,6,6 9006 DATA 8,28,28,62,62,127,8,8 9007 DATA 0,7,15,31,31,17,53,117 9098 DATA 0,0,254,255,255,95,95,95 9009 DATA 117,113,127,127,63,31,0,8 9018 DATA 94,66,254,254,755,255,248,8 9011 DATA 0.0.0.0.31.35.91.107 9012 DATA 0,0,0,7,255,255,0,255 9013 DATA 0,0,15,255,255,240,15,255 9014 DATA 8,3,255,255,252,3,255,255 9815 DATA 8,248,252,254,7,255,255,3 9016 DATA 165,213,201,171,83,71,65,0 9017 DATA 255,0,255,055,0,255,240,0 9019 DATA 240,15,255,0,255,240,0,0 9819 DATA 3,255,192,63,248,0,0,0 9020 DATA 255,254,6,254,8,0.0,0



#### OUR POLICY

We aim to create programs which you will keep on using until your computer wears out. You won't find our programs in the top len and you we look in vain for colour adverts and lancy packaging Nevertheless we have built up a solid following of discerning users. in all parts of the world. Read the reviews of our programs if you can find them. We have been consistently praised for quality, originality. and value for money

#### WHAT DO YOU GET?

The bulk of our cassettes are now made by the factory which produced the Horizons tape. Programs are recorded twice and carry on the reverse side an audio narrative to supplement the operating instructions. Where appropriate, cassettes are accompanied by a comprehensive and clearly written instruction manual.

#### 48K SPECTRUM

#### "Day of the Match"

#### £5.00

Fascinating and realistic simulation of an entire football season Name your own teams if you wish (English league provided on casselle) Rate each team from one to nine in various success categories such as attack, defence manager, eld Watch the season unloid includes knock-out cup option

#### "Bali by Bali"

£5.00

Simulates a test match series or one day international series. Set up your own teams and pool of players (England v Australia provided) Rate each player's capabilities as batsman and bowler on a one to nine scale for qualities such as talent, effort, etc. Pick your teams. and play the match. Electronic acoreboard shows progress of a match. Full supporting score card and series averages

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"Superplan Generator" Spreadsheet type program with variable column width and variable number of columns. Lets you sacrifice columns you don't need to get more lines.

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Ready-made applications programs for sales day book, purchase day book, cash book and patty cash book.

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Simple but effective information display. Up to 42 pages of text and low-res graphics. Access pages on demand or run in perpetual side-show mode. Full facilities to create your own pages and build



up an information library on cassette

#### **16K SPECTRUM** "Superdraw"

#### £5.00

£7.00

Create full colour high-res pictures and store them on cassette for use as tilles or background screens in other programs. Or just have fun doodling and build up a cassette inbrary of your creations. Side show option a lows you to review pictures stored on casselte

#### 16K ZX81

Here is a selection of tilles still available for ZX81. Send s a elifordiustrated catalogue. These are the ZX81 equivalents of the Spectrum programs described above. Although similar in concept the specifications fall short of the descriptions given for the Spectrum

"FOOTBALL-LEAGUE" Forerunner of "Day of the Match" £4.00 "TEST-MATCH" Forerunner of "Ball by Ball" £4.00 "VIDEO-PLAN" Forerunner of "Superplan" £7.00

"VIDEO-AD" "VIDEO-SKETCH" Forerunner of "Superview" \$£7.00 Forerunner of "Superdraw"

Many independent computer shops now stock our products but we continue to supply by mail order on an off-the-shell, immediate delivery basis. Prices include VAT, post and packing in U.K. Add a bit for postage if you live in Outer Mongolia. (Note: "Day of the Match" not available until late October 1983)

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"ecommende J PCW. 1st Feb 84

1'age 26 HOME COMPUTING WEEKLY 6 March 1984

# **SPECTRUM SOFTWARE REVIEWS**

Make more use of your Spectrum

Draw and learn with your computer. Our testers report back on a new batch of five programs — how useful were they?

### **How Long Have** You Got? \$3.45

Eastmead Computer Systems, Eastmend House Lyon Way, Camberley, Surrey

The title refers to your life expectancy? Like all the Eastmead Medical Series, this had severe loading problems, caused by poor quanty recordings, and an over long series of introductory SCREENS with impressive sounding titles

Based on medical statistics, by asking question about your lifestyle and habits, together with weight etc. if gives an estimate as to how long you're likely to last! Each factor has a weighting in years, added or subtracted. The

The Complete

**Guide** to

Medicine

theory is that for example, seeing how many years your 40 fags a day costs will stop you smoking There are two versions on the casselle, for 16K or 48K, which prompts an interesting thought Will you live longer with a 16k Spectrum?

Eastmead will pleased to know I only have nine years left on the basis of this program! But to be honest. I got so fired of trying to road this beast, I armost gave up If you can get a copy that loads, and you are a believer in probabilities based on statistics, and you want to examine vour life style in terms of your longevity, then this could be for D.M. you. 70%

instructions	BOTo .
case of use	90%
display value for money	90**
	-

doctor. So if you are prepared to plough through it you could

## Paintbox 48K £7.50

Print 'n' Piotter Products, 19 Borough High St, London SEI 95E

For those who regard the Spectrum as a number cruncher, or an intergalactic battlefield, the demo side of the tape will raise evebrows A motor cycle, car, electric guitar - just three of the pictures shown. And, within the limitations of the Spectrum, they are in almost perfect proportions. To guide you through the

working side, a 28-page bookiet gives all the information you are iskels to need. Four banks of user defined graphics are built into the program, each of 21 characters Three are suitable for building into graphics for games, and the

fourth is the aiphabet A to U Should you need to, any of the characters can be re-defined using the drawing board facility, including reverse rotate and mirror image

Although the high resolution plotter can be controlled by toy stick 1 found cursor controls quite adequate By switching between facilities you can gradually build up your masterpiece, saving it, or recalling it, at any stage. There are a few of these utualies on the market, some having more than others. So u's really a question of paying your money and making your choice B.B.

	160 <sub>a</sub> /e
Instructions	9(10/0
ease of use	100%
display	90%
value for money	
and the second se	
***	

**48K Spectrum** £9.95

**Chess Tutor 1** 

Get this if you do not know the first thing about chess and you wish to learn. To give you an idea of how comprehensive it is, both sides are used Starting with the positions of all the pieces. demonstrations are given of moves each can make Even pawn moves are covered thoroughly. including on passant and promotion. At every stage you can participate in exercises, and you will be shown the solution should you make a wrong move From the beginning you are taught about rank and file and the correct potation for recording moves. The basic factics are well

sovered, with plenty of exercises In particular, two exercises from Sinclate, Stanhope Road, The first involves the capture of some stand of the second some stand second to the seco the section Jealing with knights will occupy you for quite a white The first involves the capture of number of moves. The second is the knights grand tour you have to move to every square, only one visit per square, and finish on the start square very well thought out and well

presented. The almost mandatory booktet from Smelair telis you little about the program, but all the instructions are on screen Highly recommended

Falsenat	08.
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afue for money	10000
of money	100%
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Your base is undergoing a night-time air raid

Use the searchlight to pick out the enemy bombers and then blast them out of the sky!

There is no moon to help you, but you do have three flares at your disposal if you cannot find your target

Shoot down as many aircraft as you can before your base is bombed out.

Use the joystick to control the searchlight and shoot down aircraft Fiares are fired using the space bar.

• Winning Games on the Commodore 64, published at £5.95 by Ellis Horwood, Market Cross House, Cooper St, Chichester, West Sussex PO19 1EB. As well as 21 games listings, the book explains how to make best use of the Commodore 64. A cassette of the programs is available at £5.95. Book and cassette costs £11.95. A disc version is due soon.

.000 POKESI281 N POKESI288 0 REP PREPORT (147) PREPORT (150) It's World War Two again and you're in charge of an antiaircraft battery. Taken from Winning Games on the Commodore 64, by Steve Colwill and Terry Barrett, just published by Ellis Horwood

**COMMODORE 64 PROGRAM** 

Eyes to the

skies... and

blast

bombers

020 PR 117 TAB 3)\* 1030 PR(H1183.5)\*1 1040 PRINTTAL 050 BRINTTAD 5)" 1060 PRINTTRE 1076 PRINTTHE STAR 1080 PR (10\*TAB-5)\*\* 1110 PRINTERPOSITI 11-11 1.30 PRINTTRA-SI4 140 PR.MT HE SO PRINTING T 1 100 PRINTABLES TR PELINTTAB 3 NO FE TTAK 1190 PR LITAR S. P. 1.08 PPINT PRINT "COPRESS NOV KEY 10 PLAYS" 12:0 BIMR(6), D.6) P.6. 1.0 V-3.40 FUE.4, T.7. J. . . . . . . . 1210 PL+1 -TH. 1240 GOSUB2528 REM MAC JOYSTICS 250 LEINA IFRENT THENSES 1270 4 H. FE E E OF STREET ATH RE IN FILE IN &

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# **COMMODORE 64 PROGRAM**

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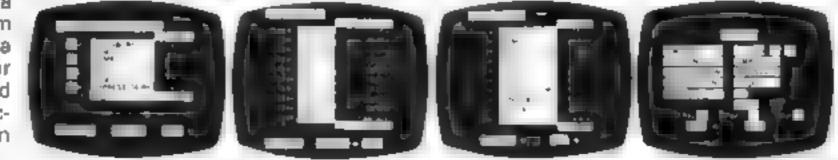
# **48K SPECTRUM OWNERS** Read This From ...LET'S GET DOWN TO BUSINESS... \* \* \* FINANCE MANAGER \* \* \*



FINANCE MANAGER is a powerful, flexible and very fast MENU DRIVEN general purpose ledger package which includes both standing order and special forward planning features. The program will handle up to 255 separate accounts and 1800 transactions. The power of MACHINE CODE has enabled us to produce the very latest "on the page" presentation which lets you enter and edit data naturally, as if you were filling in a form

These screens are just a sample to show the style of the program

But that's not all, not by a long way This program automatically raises a corresponding debit or credit for every entry, and will even open a new account if an entry features an unrecorded account name.



Information can be manipulated in various ways — you can call up your bank or credit card account, or analyse expenditure according to a variety of categories which you assign to the transactions. Instant Account balances can be listed at any time. A great time saving feature of this program is that account names and transaction descriptions need only be recorded once, as all the input fields will scroll existing files. There are many, many more features which make this the most powerful finance package around, we even include a test file for you to experiment with before getting started.

# \* \* \* ADDRESS MANAGER \* \* \*

ADDRESS MANAGER utilises the same "on the page" presentation as FINANCE MANAGER and offers Spectrum owners a professional standard address filing indexing and retrieval system. Below are examples of

the screen presentations. ADDRESS MANAGER has been carefully constructed to provide the user with a tool that is extremely friendly and easy to use, the speed and presentation of

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ADDRESS MANAGER features MULTIPLE INDEXING via our 3 way 3 character index, an ability to store over 400 full names and addresses or 1500 individual names/titles

USES include storing and updating names, addresses and phone numbers, printing out Xmas card lists etc, mail

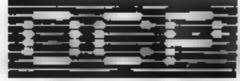
order work, customer classification by type size, (doctors have used this program to catalogue patients by treatment).

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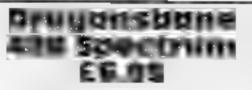


# SOFTWARE \* \* \* SIMPLY THE BEST \* \* \*

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Oxford Computer Publishing Ltd. 4A HIGH STREET, CHALFONT-ST-PETER, BUCKS, ENGLAND

# SOFTWARE REVIEWS



Quicksilva, 13 Palmerston Rd, Southampton SOI 1LL

First, there was the purely text adventure game. Next were text graphic, and pure graphics adventure games Examples of all have passed through my Spectrum, ranging from absolutely gripping, to pathetically boring.

This adventure, a text-graphics mixiare, is somewhere in the middle. The graphics display the rooms, and contents, through which you are travelling. At top right is an indicator which shows direction of travel, and swings like a compass needle according to which cursor key you have pressed. Also displayed are objects collected, and current room number, a great help if you

make maps. Among the indicafors is one showing the proximity of the damsel you are trying to rescue

Although you, the player, are not portrayed, you do get the feeling of actually moving through the game. This is what it's all aboat, this sense of involvement, and I found the screen part excellent. The let-down is the actual text. Not the plot, or theme, but the dialogue. Which is a pity. Closer attention to the finer details of dialogue and careful program structure, to achieve faster responses, would lift this program from the ordinary to the gripping. **B B** 

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instructions playability graphics value for money ·★ · ★

# Take a step into the unknown

# A page for adventure addicts... follow in the footsteps of our intrepid review team

#### Castle Discission **48K Spectrum** F (B. 195

S C R Adventures, 190 Shell bourne Rd, Tottenham, London N17

S.C.R. claims this game is a highquality adventuse aimed at master player and novice as sell have no quarrel with that, Castle Black, star is very good indeed.

Having "woken from a sleep. troubled by strange dreams", i.e. with a hangover, it seems that you have rashly promised the tall, willowy, blonde Lady Artems that you will enter Castle Black star to reclaim an orb. In return she will let you keep anything else. you may find. Not much of a ha gain, I grant you, but that's b ondes for you

The game is text only and has a vocabulary of over 200 words of which only a few are known to you to begin with Response time is good and you may use short sentences like "Take lamp and ight it" or simple verb and nouncombinations. As you search you face many and varied dangers. mull east of which is getting lost if you do not keep a careful note lf you are killed, and you certainly will be, you are remcarnated outside the castle

Castle Blackstar uses almost all available memory to provide maximum play potentia, and should offer long term interest Highly recommended!  $D \mathbf{1}$ 

instructions	10.20
playability	9K17 a
graphics	л д
value for money	N50.

### Transylvanian Tower **Commodore 64** £6.50

R chard Shepherd Elm House 23.25 Emish art La Cippenham

This is advertised as a spine childing adventure with special atar 10 graptics Web in Juln'e chal my spine and I dur't see anything spectasolar about a view of three waits of a room

R spassally a mazegame. The first stage is a very straight I nward mare through which you have to find your way with the assistance of a floor plan which you can look at as often as necessary. The next three stages are remarkably similar mazes, but a few complications start to creep

in there are various objects to find and vampire bacs to kill, and views of the floor plan we por soreadily available. On fevel two shooting the bats is very casy but il gets harder as you go on

If you have the time and patience to find you, way through four utilerent mazes, they you lice rewarded in level five with a chance to kill Co of Kreepic and find his treasure You a liave to be unoscally seen on mazes to get this far, though

Instructions	M.N.
playability grapmics value for meney	700.0 10100 n \$610 n
The state	46.0

# Lords of Time 32K BBC £9.90

Level 9 Computing, 229 Haghenden Rd, High Wyembe, Bucks HP13 SPG

First, my thanks to the company which thinks of the poor reviewer of adventure games and provides a useful help sheet. My ups are seated 1

This is a text adventure which

contains over 200 locations and some of the most intriguing puzzies I've come across. There's so much to do and so many places

to \$550

The plot involves travelling to nine time zones and collect the "symbolic objects" needed for the final victory. The booklet is the usual blend of hints and tantalising information but it does reveal that it is essential to get in the clock and travel to the

various zones. Those that I have travelied to are well described and include many oddities and anachronisms, liberties which the author freely acknowledges

- **X \* X \* X \* X** 

It is a friendly game, allowing you to save and restore game positions. It also accepts complete phrases, thus abowing a more human dialogue. You can repeat previous commands with AGAIN, use LEFT and RIGHT instead of west and east. All these and many more make this a

pleasure to play If you enjoy text adventures

then this is not to be missed

M.P.

instructions playability display	200° 200° 200° 200°
value for money	-

#### Valley of the Pharoatra 52X DDC 67.95

First Byte, 10 Main St. Derby

more I feel they should have to declare certain features. The sort of thing I would like to see are details of how many locations, language used, i.e. machine code or BASIC, type of graphics, il any, and some indication of difficulty. That is not easy to assess at all, for what is difficult to one is frustrating for another and simple to a third

This program is written in BASIC and, while being fairly attractive on the Mode 7 screen, is very small and slow to respond to your moves. It is also extremely frustrating with only two

locations accessible at first, there fore I find it hard to behave that a beginner with adventures will enjoy this. You do like to get somewhere in the first few moves. I find The story line is fair.y standard and has been used many The more adventures I review the times before, notably by Acorn soft. The language understood comprises less than 50 words --- 1 cheated and looked - which means some frustration in getting your message across. In common with other releases from this company there is no written documentation, only that seen on screen

DE

Instructions 10% 50% n/a value for money. 30%

graphics

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#### DOT MATRIX PRINTERS



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#### FRANK PARA

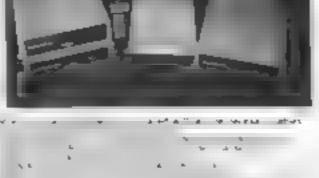
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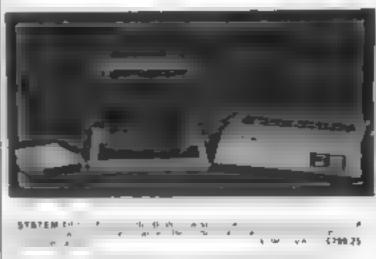


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the Apple

# U.S. SCENE

# MSX micros are caught in a vicious circle

Here's a little news about the standard that hasn't happened yet. Around the middle of last year a group of Japanese and American companies decided to establish a standard operating system for home computers to be called MSX. This was developed by our very own Microsoft, which seems to have its hand in everything these days from Apple's mouse to Zenith's operating system

Although the Japanese firms which subscribed to the MSX standards are apparently doing well with them in Japan, the onslaught of 8-bit Japanese machines using MSX has yet to be felt over here. The anticipated flood is instead turning out to be a trickle. Industry experts are starting to wonder if indeed MSX machines could even penetrate the market at this point. One thing that a lot of us noticed at the recent Consumer Electronics Show in Las Vegas was the lack of MSX micros.

Even Microsoft's Far East rep mentioned his surprise at this, but felt that the hold-back was due to the reluctance of the Japanese firms to take on America before the Taiwanese, Korean, Hong Kong and Japanese markets were satisfied. Even though Microsoft says otherwise, it is also felt that the MSX standard is just a Japanese one.

Another drawback is that not one MSX machine has been approved for sale in the U.S. Before any computer for home use can be sold, its generated interference level must be acceptable to the Federal Communications Commission, which controls use of the airwaves.

Still another drawback is the old question of software. There are only about 150 titles of MSX software available in Japan, and hardly any in English. This situation is not likely to change soon. Activision, Sierra On-Line, and Spinnaker, which all agreed to the standard last year, are three manufacturers which are very reluctant to spend a significant amount of research and development money on software products that may never be hardware-supported.

There is also trouble trying to find domestic hardware support. To date, the first and only U.S. hardware company to support the standard is Spectravideo in New York. Its model SVI 728 is basically a CP/M machine having a decent keyboard and MSX in ROM. It also markets a larger machine, the SVI 328, for which a \$50 MSX adapter will become available in SDFIR2. Microsoft is hoping this will truly become a standard, so much so that it has even designed a 16-bit version called MSX-DOS which will be compatible with CP/M-80 programs but will. be able to have colour and graphics capabilities too. MSX files wil be compatible with MS-DOS files. Microsoft hopes this will encourage users of MS-DOS at work to buy smaller and less costly machines to process the same files at home. Later this year it is planning to release rewritten versions of some of its existing applications programs such as Multiplan, and languages such as BASIC, FORTRAN, and COBOL Spectravideo is, of course, working hard to develop hardware that will support all this, in the obvious hope that it will be the leader of the pack, MSX-wise. It feels that its second generation machine, to be introduced in June at the summer Consumer Electronics Show in Chicago, will take the industry by storm. Two of the leaders of the low-cost computer market, Coleco and Commodore remain unimpressed. A spokesman for the former indicated that the main manufacturers have already adopted a wait and see attitude, while the Commodore spokesman was very forthright in stating that there was no point in adapting a hardware standard for which there was no software.

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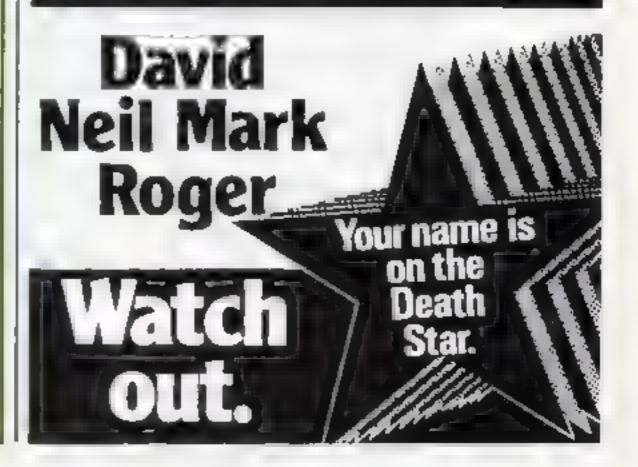
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# SOFTWARE REVIEWS

#### Dambusters 32K BBC £7.95

Alligata, 178 West St. Sheff eld SI 4ET

This game has a new scenario, to me at feast. You pilot a Webington Bomber as part of the 617 Squadron in an attack on the Mohnesee Dam. This means you have not only got to try to bomb the dam but also keep off the enemy aircraft.

To help in this task you have both rear and front gup positions. This means that with up, down, accelerate, decelerate and release bumb there are seven control keys This suggests one of two things, either the game is meant for P anetord freaks, to whom the mampy ation of hundreds of keys presents go problems, or that it is for those under the advanced age to which I now have to admit! Put

in other words I found the game rather hard and I'm pot even sure if there is a second more difficult screen vet

The screen layout is a little lacking in colour but I m certain this is for speed, of which this program does make good use The moving graphics are very good indeed. Bomb aiming is fairly easy using the convergent light principle the actual bombers. used. But mine kept huting the Island

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90**
904.
9040
90%

#### Stock Market **48K Spectrum** 66

Cases Computer Simulations, 14 Langton Way, 1 ondon 5E 3 731

If you're ted up with eating powerpills and slaying dragons then this may be for you.

You have five days to maximise your investment in six companies. You are given £15,000 to start with and you can then buy or sell shares. Your cash level is consignily printed and you are allowed overdrafts. If you have over £,5,000 you can bank some to gibb interest

Lots of detailed information is available, well presented and clear, with the option of well drawn diagrams. Play is interspersed with newsflashes which affect prices and stability of the

market 1f a company has done very well you get bonus shares bat sometimes companies fai-There is a minor bug: when you have asked for company details at the beginning the program 5 aborted later. Type 1 GOIO 1 (not RUN), refuse these details. and ali will be weld

It prints a critical analysis of your tactics, for example ... 'On two occasions you held onto shares at high prices when they were falling "Several paragraphs are in the same vein. I like this idea, perhaps I should have asked the program to review itself.

instructions	60% .
ease of use	80***
display	950.
value for money	7500

M.T



# Will you believe it's real?

# Our reviewers tackle bulls, run businesses, command a sub and pilot a bomber

## **Bull Run** Spectrum 29.23

Phippy Associates 172 Kingston Rd, I well, Surrey KT1908D

But Run has nothing to do with the American Civil War barrie of that name bar is an amusing little this is quite quickly done and then sustom of releasing buils into the streets for the braver or dafter locals to play with

The wreen needs represents apaerial siew of the town and you have to try and trap the bull -graded on three levels of bosine nastiness - in the arena You shase around the town erecting fences and acting as five bait. Of course the buil wants to gore you and often knocks over your tences it stalks you in an exciting

way and the action, while rather perkey is quite fast Success is rewarded by the townsfulk with muchns pesetas and a commend able feature is that the bull has a rather better chance than in real

The game is one of those that keep you "wanting just one more there is little more on offer Compared with the many mails staged games on current release Bull Run is, I feel, rather over priced

Unstructions	D.J.
Jadrabiling	80,4%
Staphics Value Co	6.5 %
value for money	7()0.0
A DECEMBER OF	6()%

### Sub Spectrum £6.99

Romik, 272 Argyll Ave, Slough, Berkshure

Sub simulates a struggle between you, captain of the frigate Anachronous, and a Soviet submarine How accurate it is i would not know as my naval-war fare experience extends no further than the queue in the careteria on the Isle of Man ferry But never theless Sub is intriguing and

challenging.

The screen shows instruments for range, depth and direction of toe along with you speed, heading, and rudder position Also dis played is the depth setting and your depth charges. In the centre

is the sonar display By varying course and speed

you try to intercept and destroy the sub before he torpedoes you My early efforts included being blown out of the water after less than a minute, likely to be an unbeatable record. If you win you get a brief rendering of Rule

Britania There are three ranks prom otion leading to a harder game and five skill levels. Higher levels are certainly taxing Selecting Russians as chemics seems some how improper compared with factitious planets. Definitely not one to improve bast West relations!

0.1.

904% instructions 80.4 4 playability 604 graphics 859.0 value for money



#### Manage **48K Spectrum** E 6

Cases Computer Simulations, 14 Langton Way, London SE3 7TL

A program for the budding entrepeneur or A level business studies student. I had to engage the services of both to enable me to make head or taw of it.

The dears to build up cash and plant so your opponent cannot compete successfully

tach must make decisions price of goods and marketing, production, research and devetopment costs. Once you have typed in these numbers, the results are calculated. This is where my entrepencur business student came in: five pages of information were displayed, all double Dutch to me, even though the inlay stated: "No prior financial knowledge is required." The meaning of the jargon is notexplained in the instructions they don't explain much more than the rules

However, once in the know, I found the information to be an essential part of the game, well displayed and easy to understand once you know what the headings mean. As a game I found it a httle redious to play because of all the data players have to enter. How ever a could prove aseful as an educational aid. Nowhere does it ted you what you are supposed to be selling!

-	M T.
instructions case of use display value for money	45% 50% 85% 60%
the first state of the state of	

1.1

# CHRISTINE

# TI 99/4A

# BLASTIT

Disarm bombs with a wire guided robot, bombs must be disarmed in order within a time limit. 5 levels of play, high score table;

## £4.95

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£6.95

# CORE

A three part game, move left and right as you descend through the clouds, birds and seroplanes. On to the caves and cavems then through the 3-D maze to the Core.

# FRUIT MACHINE

One arm bandit simulation featuring random hold, nudge and gamble.. 'Reels' are fixed and can be learnt but motion is random...

# UFO

Blast the aliens as they appear from hyperspace, features 3 levels of play, refuel etc.

# SPUDZ

Score points as you collect potatoes without: getting caught in the shadow cast by the setting sun or falling into your trench.

# **COMMODORE** 64

# MUNCHER

100% machine code game making good use of the sound and graphic facilities of the 64. Munch your way around the maze avoiding the ghosts, etc.

Send Cheques and Postal Orders to:

CHRISTINE COMPUTING, 6 FLORENCE CLUSE WATFORD, HERTS WD2 6AZ Tel: Watford (0923) 672941 Please add 55p P&P per order.

# **BBC PROGRAM**

#### Hints on conversion

PROCedures are similar to GOSUB except that they need no line number. The following PROCs are used

PROCinit mitialisation

- PROCIIIle title page
- PROCunit roads(LEVEL) sets number of cars on roads depending on level
- PROC screen sets up games screen PROC move cars moves cars on
- road PROCkey check checks if key bas

PROL time updates time countdown

PRO( lives(LV) prints number of lives left

PROC soake moves snake in grass PROC score(5%) updates score

PROCerash check checks if frog has been killed

**PROCtune** plays tune

Mode 2 sets up screen 20 rows by 32 columns or 1280 by 1024 pixels

i&FF00 = &10200A kills the cursor

?(&25A) = 40 puts keyboard in upper case and keeps it there

+ FXIS, I clears keyboard buffers,

ADVAL(0) checks fire button and ADVAL(1) and ADVAL(2) check joystick movement

VDU23,... defines user definable graphics

ENVELOPE controls character of SOUND statement VDL28 sets text window

In this game for the BBC Model B called Ribbet, you are a frog and you have to cross a main road with lots of cars.

You have five lives and there is also a clock at the top of the screen — dawdle too long and Hop across the road... and watch the cars and snakes

Your skill at dodging cars and Sid the Snake will be tested in this variation on a popular game from Andrew MacMaster

1008 MODE 21 \* 5FE 00+510200A 1805 SX=0:NL=0:HD=0:SC=1:DE=0:LV=5:SN=0:SA=0:X3=0 1986 1010 PROCINIT 1811 PRDCtstlm 1812 VD07: MODE2 1828 PROCINIT FORGERLEVELI 1038 PRULACTION 1848 PROCEOVE CALL 1045 SC-0 1858 PROCKey check 1055 [FNL+1THENNL+0:X1+10:Y1+27:TT+100:NODE2:GOTD1020 1068 PROCcrash check 1878 PROCLIME 1071 PROCISYMM/UV) 1872 IFDE=LTHENDE=8:GOTD8886 1090 ...... 1100 PRODUCOre(S%)

#### Variables

S<sup>476</sup> score I V lives left X1 X position of frog Y1 Y position of frog TT time left HOS(4) river bank holes I.S middle of road RS(4) roads RIS(4) river I EVEL current level AS input JOY joystick or not AA middle point of frog

you run out of time and die. There is also a patch of grass near the road which hides Sid the Snake.

Get four frogs across safely and you get a chorus of Yankee Doodle Dandee and gon to the next level — there are five in all

You can use joysticks in place of the keyboard. When the program says SPACE or FIRE to start the game press FIRE for the joystick selection

The game takes up 6634 bytes of memory in MODE 2 leaving 2070 bytes free to shorten the program. Typing in Time, the title page, joystick routine and two tune sections could all be left out

#### How it works

1000-1011 initialise and call title page

1020-1030 set road and set up screen

1040-2000 main program loop 3000-15140 subroutines 15300-15350 joystick test

2000 GGTO1040 3000 DEFPROCINIT 3001 VDU23,244,9,129,129,66,66,36,24,0 3002 VDU23,245,60,102,231,129,129,231,231,255:VDU23,24 6,255,255,255,255,255,255,255,255,255 3063 VDU23,200,RND(255),RND(255),RND(255),RND(255),RND 51:8 5#=STRING#(L(LEVEL), " ")
31:5 L1=L(LEVEL)+1
31:8 5#=STRING#(L(LEVEL), " ")
31:5 L1=L(LEVEL)+1
31:8 V=224:FORX=IT04:N=20 DIV L1:R#(X)=STRING#(N,S#+CH
R#V):V=V+1:NEXT
51:30 FORX=IT04:N=20-LEN(R#(X)):R#(X)=R#(X)+STRING#(N, "
"):NEXT
31:40 FORX=IT04:T=RND(10):FDEY=1T07

(255),RND(255),RND(255),RND(255)	2140 FORK#TID411=XMDCL031FDK4=1101
3884 VDU23, 281, RND (255), RND (	ND 3158 B##RID#(R#(X),1,1):R#(X)=RIGHT#(R#(X),(LEN(R#(X))
(255) RND (255) RND (255) RND (255)	*1));R\$(X)=R\$(X)+B\$;NEX1;NEX1
3205 VDU23, 202, RND (255), RND (255), RND (255), RND (255), RND (255), RND (255)	ND 3168 ENDPROC
(255),RND (255),RND (255),RND (255)	4888 DEFPROCiscrieen
3806 VDL23,243,0.1,129,73,85,85,85,34	4018 CLS
3010 VDU23,255,170,85,170,85,170,85,170,85,170,85	4015 'SFE00=510200A
3013 VDU23,238,0,2,5,3,7,7,23,63	
3015 VDU23,231,0,64,160,192,224,224,232,252	4030 PRINTTAB(0,1);:FDRX=1T020;PRINTCHR#255;:NEXT
3018 VDU23,232,63,63,31,31,15,15,8,28	4040 FORT=2103; PRINTTAB(0,1); (FORX=1103; PRINTCHR\$255; 1
3028 V0U23,233,252,252,248,248,248,248,248,26,56	NEXT: FORX=1703; PRINT= =; CHR#255; CHR#255; : NEXT: PRINT"
3022 DIMMD\$ (4)	T##FORX=1T03#FRINTCHR#255, #NEXT_NEXT_
3038 L\$=STRING\$(20,"-"):TT=100	4050 CQL QUR1 32
3033 BE#=STR [NG# (20, CHR#244)	4060 FORX=4TD121PRINTTAB(0,X);:FORT=1T020:PRINT* *1:NE
3048 VDU23,224,0,224,78,255,255,70,224,0	XT2NEXT
3050 VDU23,225,0,231,66,127,127,66,231,8	4062 PRINTTAB(0,4);SE#
3060 VDU23,226,7,2,71,255,255,71,2,7	4064 PRINTTAB(0,6); SE4
3078 VDU23,227,0,231,255,255,255,255,255,231,0	4066 PRINTTAB(0,8 ;SE#
3075 VDL23,227,153,187,126,60,60,255,127,127	PRINTIAB(0,10);SE#
3076 ENVELOPEL, 1.0.0, 8,0,0,0,126,-1,0, 3,126,126	4069 PRINTTAD(0,12); SE#
3088 D1)R#(4) .RI#(4) .L(6) .L[#(4)	INNIN COLOUR2: COLOUR128
3081 A=2:FORT=1T04:FORX=1T0A _ I\$(T)=L1\$(T)+CHR\$244:N	EX PRINTTAB(0,13);:FORX=ITD20:PRINTCHR#255::NEXT
T:FORX=1TOA:LIS(T)=LIS(T)+CHR\$246:NEXT:A=A+1:NEXT	PRINTIAB(0,14); :FORX=ITD20:PRINTCHR#255; :NEXT
3085 R(\$(1)=STR[NG\$(5,L[\$(1))	PRINTTAB(0,15);:FORX=:TD20:PRINTCHR:255;:NEXT
3056 R[#(2)=STR[NG\$(3,L]#(2))	4100 PRINTTAB(0,27);:FORX=1T020:PRINTCHR\$255;:NEXT
3087 RI\$(3)=STRING\$(2,LI\$(3))	4118 COLOUR9: COLOUR128: PRINTTAB(0,21);L\$
3088 RI\$(4)=STRING\$(2,LI\$(4))	4111 COLOUR2:FORX=1TD4:IFHO#(X)="F"THENA=(4+X)-1:PRINT
3898 FORX#1T04:N=20 LEN(RI#(XI):RI#(X)=RI#(X)+STRING	
N,CHR#244):NEXT	4112 NEXT
3295 LEVEL-1	4113 ENDEROG
2180 X=9:EOBA=1.402:f(A)=X:X=X-1:NEX1	4115 DEF PROCesse cars
3102 X1=10:V1=27	
3104 ENDPROC	4128 COLOUR7: PRINTTAB(0,17);8#(1)
3105 DEFPROCINIt_roads(LEVEL)	4124 PROCerash check

#### **BBC PROGRAM** 4125 COLOUR6: PRINTTAB(X1, V1); CHR#229 9868 AS=GETS 41 30 COLOUR1: PRINTTAB(0.19) (R#(2)) 9070 IFA#="Y"THENCLEAR: GOT01000 A134 PROCerash check 9268 IFAF="N"THENCOLOUR1:PRINTTAB(2,10); "ALAS WE DEPAR 4135 COLOUR6: PRINTTAB(X1, Y1); CHR#229 T":FORX=1T02500:NEXT:MODE6:GDT09095 4140 COLOUR4: PRINTTAB(0,23); R#(3) 9090 GOTO7868 4144 PROCerash check 9095 END 4145 COLOURS: PRINTTAB(X1, V1): CHR#229 9180 DEFPROCLUNG 4147 LOLOUR5: PRINTTAB (0, 25) (R\$ (4) 9110 TX=TX+1: JF TX=50THENRESTORE9200; TX=1 4158 PROCerash check 9120 READA: READB: SOUND1, 5,A,B 4151 COLOUR6: PRINTTAB (X1, Y1)1CHR#229 9138 ENDEROC 4152 COLOUR3: COLOUR132: PRINTTAB(0,5);R(#(1) + 9200 DATAL49,10,149,5,149,2,149,5,141,2,137,5,149,2,15 4154 PRINTTAB(0,7);RI\$(2) 9,5,177,2,185,5,185,2,185,5,177,2,169,10,169,5,169,2,15 4156 PRINTTAB(0,9);R[\$(3) 7.5,157,2,157,5,165,2,169,5,165,2,169,5,157,2,149,5,157 4158 PRINTTAD(8,11);R1#(4) ,Z,149,5,137,2,149,10,149,5,149,2,149,5,149,2,149,5,141 4159 COLOUR128:COLOUR6:PRINTTAB(X1,Y1);CHR#229 ,2,137,5,149,2,169,5 4168 FORX=2T04 BTEP2:8\*=MLD#(R\*(X),1,1);8\*(X)=R)GHT#(R 9210 DATA177,2,185,5,185,2,185,5,177,2,169,18,169,10,1 # (X) \_ {LEN(R# (X)) ~ }));R#(X)=R#(X)=B#:NE(X) 77,10,177,10,169,10,165,10,169,20 4170 FORX=LTD3 STEP2:8#=M10#(R#(X),LEN(R#(X)),1):R#(X) 9700 REMARL FROGS HOME =LEFTs(R#(X)\_(LEM(R#(X))-1));B#=B#+R#(X)=R#(X)=B#iNEXT 9385 RESTORE9358 4188 FORX=2T04 STEP2: 8\*=M104 (R1\$ (X) \_1\_1) : R1\$ (X) =RIGHT# 9318 FORX#17027 RI#(X1, (LEN(RI#(X))-1));RI#(X)=RI#(X)+B#cNEXT 9320 READA: READB: SOUNDL, 7, A, B 4198 FORX=1TO3 STEP2:B#=MID#(RI#(X),LEN(RI#(X)),L):RI# 9310 SOUND1,0,1,1 (X)=LEFT#(RI#(X),(LEN(RI#(X))-1)):B#=B#+R1#(X):RI#(X)=B 9340 NEXT #ENEXT 9342 #FX15,1 4171 IFHD=8THEN4208 9345 GOTD4272 4192 [FY1=5 OR Y1=9 THENX6=1 9358 DATA149,5,149,5,157,5,165,5,149,5,165,5,157,18,14 4193 IFY1=7 OR Y1=11 THEN\$6=-1 9,5,149,5,157,5,165,5,149,18,145,18,149,5,149,5,157,5,1 4194 COLDUR3: PRINTTAB(X), VI): CHR#246 65,5,169,5,165,5,157,5,149,5,145,5,129,5,137,5,145,5,14 4195 X1=X1=X6:[FX1=0 ORX1=19THENHO=0:TT=0:ENDPROC 9,10,149,10 4196 COLOURS: PRINTIA8(XL, YL); CHR\$229 9400 DEFPROCISION (SC) 4708 ENDPROF 94 Million (1996) (1996) 4218 DEFPROCKey check 9418 PRINTTAB (8, 38) ; "SCORE : "; 5% 4215 7(825A)=40 9428 ENDPROC 4220 A\$#1NEEY#(30) 9600 DEFPROCanake 4275 IFJOY=ITHENPROCJOY=ticks 9618 [ESN=1THEN9640 4238 IFA#=""THENCOLOURG: PRINTTAB(X1, V1): CHR4229: ENDPRO 96.28 RR+RND13) : 1FRR=2THENSN=1: GOT09618 10 9678 ENDPROC 4 31 IFY1=27 OR Y1=13 OR Y1=15 THENSLARCHR\$17+CHR\$2+CH 9640 IF Sk >1 THE N9660 R#255:G0T04235 9658 Y3=12+RND(3):5k=1 4212 [FY1421THEN51#=CHR1]7+CHR19+\*\* \*:GOT04\*75 9668 COLOUR2: PRINTTAB (X3, Y3); CHR\$255; COLDUR5: X3=X3+1:1 4213 [FH0+]THENS1#+CHR#17+CHR#3+CHR#246:60104235 FX3=19THENX3+0:SK+0:SN+0:ENDPROC 4234 S18\*\* \* 9678 COLDURS: PRINTTAB (X3, Y3); CHR#243: ENDPROC 4235 PRINTTAB(X1, Y1):S11:COLOUR6 11000 REMANDES 4236 IFH0+1THEN4260 11005 HX-0:FX-0:H0-0 4240 JEA\$\*\*Z"THENIEXI OTHENX1=X1 1 11100 IFX1=3 OR X1=4 THENHZ=1 42%0 LEAT IX THENTEXT 197HENX1 X1+1 11110 IFX1-7 DR X1-8 THENHX-2 4248 IFA#="1"THENY1=Y1 Dit D-8:5%=5%=5%EVEL 11120 IFX1=11 OR X1=12 THE NHX#3 4270 IFAtH"/"THENTEY1<>27THENY1=Y1+2:LOH0 11178 IFX1-13 DR X1-16 THENHX-4 4271 1FY1 5 THEN 11000 11135 [FHX-0THENTE-D; 50T04275 4272 1ENL =1 THENENDEROC 11137 SX=SX+13+LEVEL 4275 PROCEE ash There. 11148 JEHOs (HX) = "F"THENTT-8; HO\$ (HX) = "; GDT04272 4,208 SOUND3, 7,200,2 11158 FORX=1704:1FH04(X)="F"THENEX=FX+1 4 '85 •FX15.1 11152 MEXT 4 92 ENDERIG 11153 IFF%=3THENLEVEL=LEVEL+1:9%=S%+TT+2:FORX=1T04:H0#1 4 100 OCEPRODerash check X1=""teNL=LENEXT:GOTGEL170 4 105 IF SCHLTHENENDPROC 11160 HO# (HX) +"F" 4110 A= J1 Y11Y1 A+121K, X1+64 11178 COLDUR2 4 .20 AA POINTO2+72, V2+161 11175 IFLEVEL=6THENLEVEL=1 4570 JEAA+6 OR AA+, DR AA+0 DR AA+9THEN4350 11180 IFHX=1THE MPRINTTAB(3,2); CHR#230; CHR#231; TAB(3,3) ( 4535 [FAA=3THENHO=1:ENDPROC CHR#232:04R#273 4348 DE =1 11170 TFHX=ZTNENPRINTTAB(7,2);CHR#230(CHR#231;TAB(7,3); 4158 ENDPROC CHR#232;CHR#233 7 100 DEFPROCLIME

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# TI-99/4A PROCRAM

# Mind the flak, chaps. We must destroy the dam

Your aircraft is trying to destroy an enemy dam by dropping bouncing bombs. Your bombs must hit the water before hitting the dam or the enemy will retainate with anti-aircraft fire, damaging your engines

Five hits on the dam are required and you have up to 10 bombs to complete your mission. The game is fairly user-hostile in that there are many ways of losing — crashing into the water, getting hit by your own bomb, being shot down or just running out of bombs

Full instructions are included in the program, so good luck and come back safely, chaps.

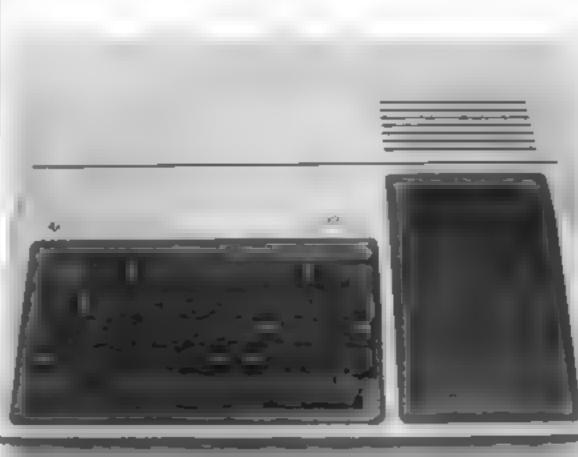
#### How it works

- 190-390 define characters and assign colours 400-590 title screen and in structions request 600-700 instructions 710-820 skill levels 830-1080 set up screen and set variables 1100-1170 set plane moving 1190-1210 detect plane crash 1230-1490 detect keys and release bomp 1500-1530 check position of bomb 1550-1790 anti-aircraft fire, hits on dam 1810-2140 dam destroyed
- 2170-2580 lose sequences
- 2600-2630 print routine

100 REM

110 REM ###DAM RAIDER###

The pride of the squadron rests with you, your crew and your TI-99/4A. Type in Graham Baldwin's game for the standard TI... and return home safely to Blighty



#### Hints on conversion

Ti BASIC is fairly standard but has some unique graphics commands, some of which are detailed below. The screen is made up of 32 columns and 24 rows

- CALL CLEAR clears the screen Replace with CLS or similar on other machines
- CALL CHAR re-defines an ASCE character with a sixteen digit hex string derived from an 8×8 grid
- CALL HCHAR(R.C.ASCE) places a character at row R and column C on the screen and optionally repeats it horizontally

CALL VCHAR similar to HCHAR but repeats character vertically

- CALL GCHAR(R, C, X) repeats the ASCE code to variable X of screen position R and C Similar to a screen PLEK on other machines
- CALL KEY(3, K, S) places the code of the key pressed into the variable K. Similar to GFT on other computers

#### Main variables

ROW row of plane COL column of plane BR row of bomb BC column of bomb SCR number of hits on dam BMS number of bombs REV chmb or dive plane

TID REIT ARAUNIT REIDERAAR	
120 REM	
130 REM BY	
140 REM GRAHAM BALOWIN	388 CALL COLOR(1,16,5)
150 REM	390 NEXT I
160 CALL CLEAR	400 RANDOMIZE
178 REM #DEF CHARS#	410 CALL SOUND(100,1800 5)
180 CALL SCREEN(3)	420 MS##"DAM RRIDER"
190 CALL CHAR(136, "101010FF10101010")	438 RP=18
200 CALL CHAR(112, "EFEFFFFFFFFFFFFFFFFFFF)	440 F=10
210 CALL CHAR(113, "10387CFEFFFFFFFF)	450 GOSU8 2590
220 CALL CHAR( 97, "2080C8FF7E081020" )	460 MS##"#########
230 CALL CHAR( 98, "000020702" )	470 CALL SOUND(100,1800,5)
240 CALL CHAR(105, "995A3CFF183C5A99")	460 RP=12
250 CALL CHAR(120, "FFFFFFFFFFFFFFFFFFFF)	490 F=10
260 CALL CHAR(121, "FEFFFFFFFFFF50303030")	500 GOSUB 2590
270 CALL CHAR(122 "000103060(103060")	516 MSS="DO YOU NEED BRIEFING? (YZN)"
280 CALL CHAR(152, "3C7EFFFFFFFFFFFFFFF)	520 CALL SOUND(100,1000,5)
290 REM *COLOURS*	530 RP=16
300 CALL COLOR(14,12,2)	540 F=3
310 CALL COLOR(16,12,5)	550 GOSUB 2590
328 CALL COLOR(11,8,5)	560 CALL KEY(3,K,S)
330 CALL COLOR(9,16,5)	570 IF S=0 THEN 560
348 CALL COLOR(10,9,16)	580 IF K=78 THEN 710
350 CALL COLOR(12,2,5)	590 IF K<>89 THEN 560
360 REM *SET SCREEN*	600 CALL CLEAR
370 FOR 1=2 TO 8	610 PRINT "YOU ARE FLYING A TWIN-ENGINE"
	ENGANE -

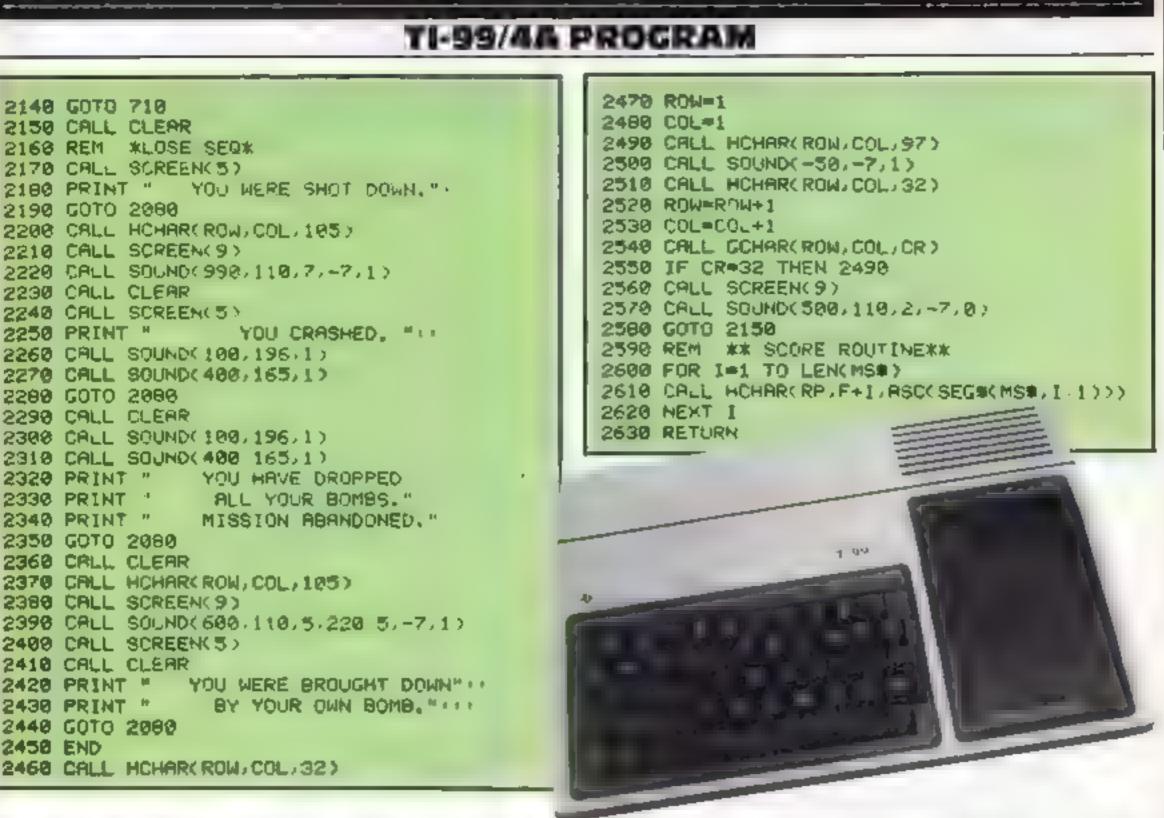
# TI-99/4A PROGRAM

620 PRINT "DAM-RAIDER AIRCRAFT." 630 PRINT "DESTROY THE DAM BY BOUNCING " 640 PRINT "BOMBS OFF THE WATER." 650 PRINT "FIVE HITS ARE REQUIRED." 660 PRINT "A DIRECT HIT WILL CAUSE" ··· 678 PRINT "ANTI~RIRCRAFT FIRE TO" 680 PRINT "DAMAGE ONE OF YOUR ENGINES." 690 PRINT "PRESS U TO CLIMB AND" 700 PRINT "SPACE TO DROP R BOMB." 710 PRINT " SKILL LEVEL? (1-3)" 720 CALL SOUND(100,1000,6) 730 CALL KEY(3,K,S) 740 IF S=0 THEN 730 750 IF K<>49 THEN 700 760 BMS=10 770 GOTO 030 788 IF K<>50 THEN 810 790 BMS=7 600 GOTO 830 818 IF K<>51 THEN 720 820 BMS=5 830 ENG=2 848 CALL CLEAR 850 SCR=0 860 REM #SET UP SCREEN\* 970 CALL HCHAR(20,1,113,29) 880 CALL HCHAR(21,1,112,128) 690 F#2 900 RP=23 918 CALL VCHAR(16,30,136,9) 928 CALL VCHAR(17,31,136,8) 930 CALL VCHAR(16,32,136,9) 948 CALL HCHAR(19,1,120,6) 950 CALL HCHAR(18,4,121) 960 CALL HCHAR(17,4,122) 970 CALL HCHAR(1,7,152) 980 CRLL SOUND(10,1800,6) 998 MS#=" BOMBS- "4STR#(BMS) 1000 GOSUB 2600 1010 ROW=INT( 10\*RND )+1 1020 REV=1 1030 CALL HCHAR(20,1,113,29) 1048 COL=1 1050 F=10 1868 RP=23 1070 MS=STR=(BMS)&\* \* 1000 GOSU9 2600 1090 REM \*THE GAME\* 1100 CALL HCHAR( ROW, COL, 97) 1118 IF BMS=8 THEN 2290

1380 REV=1 1390 CALL HCHAR(20,1,113,29) 1400 ROW=INT(10\*RND)+1 1410 F=10 1420 RP=23 1430 MS\$=STR\$(BMS)&" " 1440 GOSUB 2600 1450 CALL HCHAR(ROW,COL,97) 1469 CALL HCHAR( BR, BC, 32) 1470 BR#BR+A 1490 BC=BC+1 1490 IF BC>32 THEN 1100 1500 CALL GCHAR(BR, BC, H) 1510 IF H=32 THEN 1330 ELSE 1520 1520 IF H=113 THEN 1530 ELSE 1590 1530 R=-1 1340 REM #SHELL-FIRE# 1550 Q=1 1560 CALL SOUND(40,-6,1) 1570 CALL HCHAR( BR, BC, 32) 1580 GOTO 1330 1590 IF H=136 THEN 1610 ELSE 1600 1600 IF H#97 THEN 2370 1610 IF Q=0 THEN 1620 ELSE 1750 1620 CALL HCHAR(16,5,105) 1630 CALL HCHAR(11,18,105) 1640 CALL HCHAR(11,27,105) 1650 CALL HCHAR(11,9,105) 1660 CALL SCREEN(9) 1670 CALL SOUND( 500, 110, 8, -7, 1) 1600 CALL SCREEN(5) 1690 CALL HCHAR(11,9,32) 1700 CALL HCHAR(11,18,32) 1710 CALL HCHAR(11,27,32) 1720 CALL HCHAR(16,5,32) 1730 ENG=ENG-1 1740 IF ENG-0 THEN 2460 ELSE 1100 1750 SCR#SCR+1 1768 CALL HCHAR( 98, 80, 105) 1770 CALL SOUND(500,110,5,220,5,-7,1) 1788 CALL HCHAR(BR, BC, 32) 1790 IF SCR=5 THEN 1000 ELSE 1100 1808 REM #WIN SEQ# 1810 CALL VCHAR(16,31,105,9) 1820 CALL SCREEN(11) 1830 CALL HCHAR(ROW, COL, 32) 1948 CALL SOUND(100,110,4,-7,1) 1950 CALL SCREEN(5) 1960 FOR I=1 TO 16 1878 CALL SOUND(-158,-7,1)

- -

are at bito o then eque	1880 NEXT I
1120 CALL KEY(3,K,8)	
1130 CALL HCHAR(ROW, COL, 32)	1890 CALL VCHBR(16,30,32,9)
1148 COL=COL+1	1900 CALL VCHAR(16,31,32,9)
1150 ROW-ROW+REV	1910 CALL VCHAR(16,32,32,9)
1160 IF ROW>1 THEN 1190	1920 CALL HCHAR(21,1,112,128)
1170 ROW-1	1930 CALL HCHAR(19,1,32,6)
1160 REM #DETECT HITS#	1940 CALL HCHAR(18,4,32)
1190 CALL GCHAR(ROW, COL, CRH)	1950 CALL HCHAR(17,4,32)
1200 IF CRH(>32 THEN 2200	1960 FOR 1=20 TO 24
1218 1F COL=32 THEN 1010	1970 CALL HCHAR(1,1,113.32)
1220 REM *DETECT KEYS*	1988 FOR D=1 TO 200
1230 IF K<>85 THEN 1258	1990 NEXT D
1240 REV=-1	2000 CALL HCHAR(1,1,32,32)
1250 IF K<>32 THEN 1100	2010 CALL SOUND(300,-5,6)
1260 CALL SOUND(15,1000,1,-7,0)	2020 NEXT I
1270 BMS=BMS-1	2030 CALL CLEAR
1280 8=1	2040 CRLL SOUND( 100, 294, 4, 440, 4, 370, 4)
1290 0-0	2059 CALL SOUND(1000,294,1,440,1,370,1)
1300 BR#ROW+R+1	2060 PRINT " YOU OURST THE DAM."
1310 BC=1	2070 PRINT " MISSION SUCCESSFUL."
4 · -	2080 PRINT BNOTHER GAME? (Y/N)
	2090 CALL KEY(3,K,S)
1330 CALL HCHBR(BR, BC, 98)	2100 IF S=0 THEN 2090
1340 CALL HCHOR(ROW, COL, 32)	2110 IF K=89 THEN 2130
1350 COL=COL+1	
1360 IF COL=32 THEN 1370 ELSE 1450	2120 IF K=78 THEN 2450 ELSE 2090
1370 COL=1	2130 CALL CLEAR

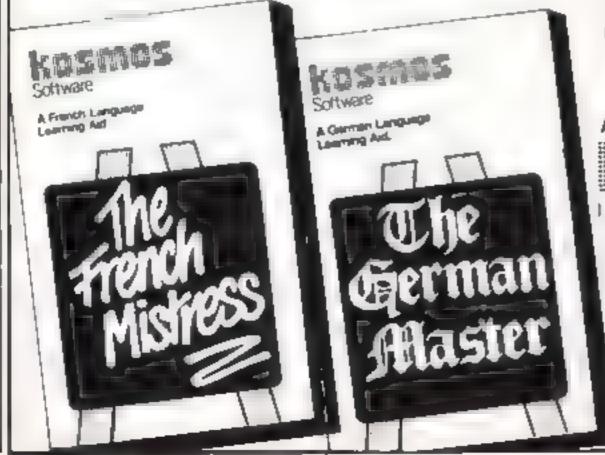


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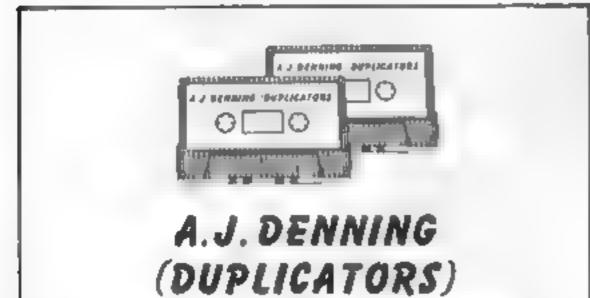
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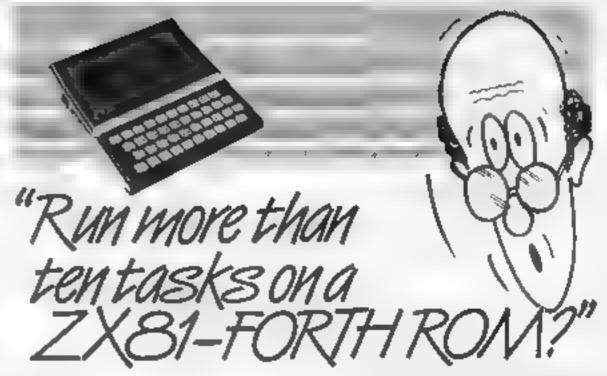
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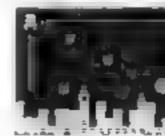
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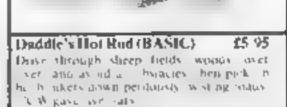
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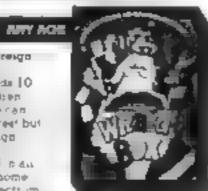
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Election is a program in which you've just won the General Election. The object of the game is to stay in power Decide how much you are going to spend on defence, food and industry — if you get it wrong you may be faced with invasions, strikes or other nasties.

If you want to survive keep an eye on your census results these will tell you just how popular you still are. could you run the country?

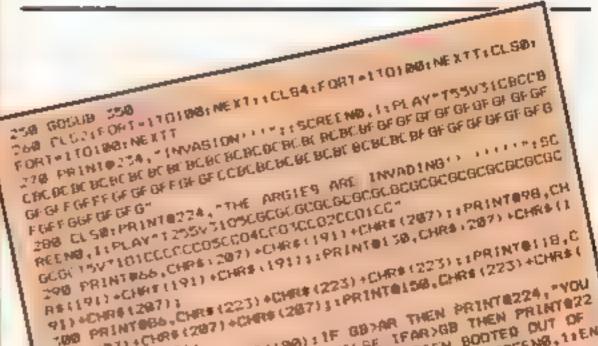
#### Variables

M money DF defence budget FO home secretary's budget IN industry budget PR profit TM time spent in office

#### 10 CLSC

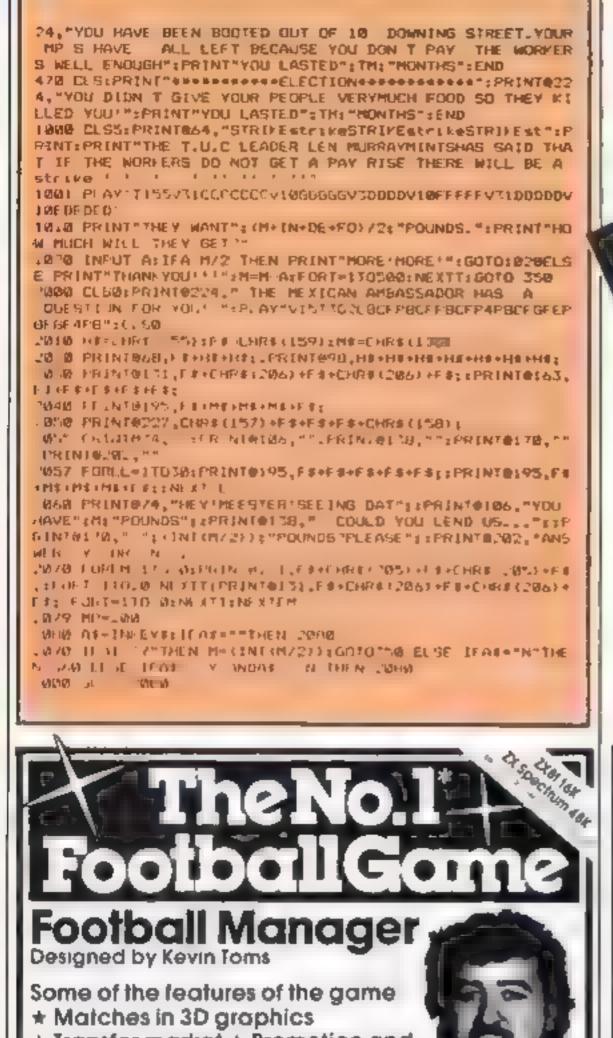
```
?"ELECTION"
11 11
12 Bs=CHR#(159)
13 PRINT#67,8*+8*+8*+8*+8*; PRINT#99,8*; PRINT#131,8*+8*+8
$1:PRINT#163,84;:PRINT#195,85;:PRINT#227,85+85+85+85;
14 ($+CHR$(191)
15 PRINT#71,L4::PRINT#1#5,L4::PRINT#135,L4::PRINT#167,L
#11PRINT#199,L$12PRINT#231,L$+L$+L$+L$1
16 ES=CHR#(159)
17 PRINT#75,E#+E#+E#+E#+E#1:PR1N7#107,E#1:PRINT#139,E#+E#+
E#11PR1N7#L71,E#11PR1NT#2@3,E#11PR1N1#235,E#+E#+E#+E#+E#
18 C#=CHR#(191)
19 PRINT#79,C$+C$+C$+C$;:PRINT#111,C$1:PRINT#143,C$1:PR
INT#175,E$;:PRINT#287,E$;:PRINT#239,C$+C$+C$+C$;
28 T#=C/R#(159)
21 PRINT003, T0+78+T$1:PRINT0116, T#: PRINT0148, T$1:PRINT
#100,T$t:PRINT#212,T$t:PRINT#244,T$t
22 [$=CHR$(191)
23 PRINT086, [4; PRINT0118, [4; PRINT0158, 14; PRINT0182, 1
#1:PRINT#214,1#1:PRINT#246,1#1
24 D#=CHR#(159)+2#=CHR#(128)
25 PRINT087,0$+0$+0$;:PRINT0119,0$+28+0$;:PRINT0151,0$+
7#+0#11PRINT#183,0#+2#+0#11PRINT#215,0#+2#+0#11PRINT#24
7,09+09+061
24 N#=CHR#(19))
27 PR1HT090,NS+NS+NS+NS; PRINT0122,NS+25+25+NS; PRINT01
54,N$+2$+2$+N$11PH[N]#186,N$+2$+2$+N$17PR]N7#218,N$+2$+
```

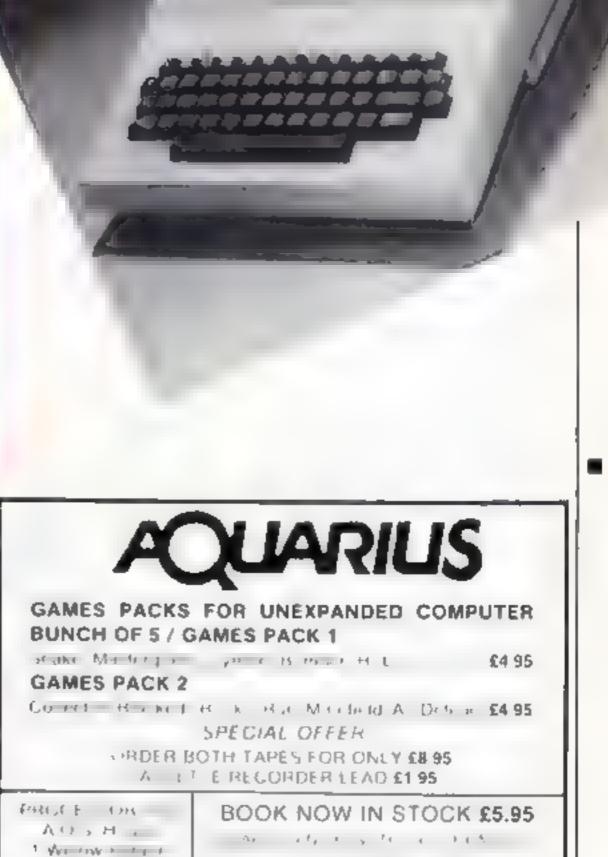
With big budgets for defence, food and industry, you have to keep the country from being over-run by the Argies, or overwhelmed by strikes in Marc Cawthorne's game for the Dragon



Z#+N#1:FRINT@250,N#+Z#+Z#+N#: 30 PRINT@256,"ELECTION-BY MARC CANTHORNE 1903":BCREEND, 100 MP=200 110 MAGGIE 1/0 M=90000 130 PRINT@320,"YOU ARE THE BRITISH PRIME MINIS TER.YOU HAVE 90000 POUNDS WHICH MUST BE SPENT ON DEFENCE.CRIME, INDLISTRY.EVERY MONTH A CENSUS SHOWS HOW WELL YOU A RE DOING" 135 SCREEND,1 136 POFE359,57 140 PRINT"PRESS ENTER TO BTART=:SCREEND,1:EXEC41194 150 CL62:PRINT" defence=":PRINT=YOU HAVE";M;"PO UNDS.":PRINT" HOW MUCH WILL TARZAN YOUR DEFENCE	100 PRINT (LORS (207) HES (207) + (LORS (207) 10) + (HES (207)) 10)
E SECRETARY GET?" 160 INPLITOE:SOUNDIDD,1:IFDE>M OR DE 0 THEN PRINT"CHEAT' ":GOTOISO ELSE M#M-DE:DE=DE 170 CLS3:PRINT" Crime":PRINT"YOU HAVE":M:"POUN DS.":PRINT" HOW MUCH WILL LEON (GREAT) BRITAIN YOUR HDME SECRETARY GET?"	368 IF H=1 DR H-8 THEN 438 378 IF HP=+8 THEN GOTO 468 388 TH=TH+1 398 CLS:PRINT=NATIONAL CENSUS, HONTH=:TH:PRINT:PRINT=PRINT=YBU HAVE=:N; "POUNDS TO SPEND":PRINT=THERE ARE=:HP; "HP18 IN YOUR PARTY"
188 INPUTFO: SOUNDIDG, 1: IFFORM OR FOX® THEN BOTDIZE ELSE M=M-FO 198 CLSA:PRINT" Industry".PRINT"YOU HAVE":M, "F OUNDS. "IPRINT"HOW MUCH WILL CEORIC MOSEYPARKINSON YOUR INDUSTRY SECRETARY GET TO PAY THE WORKERS?" 708 INPUTIN: SOUNDIDG, 1: IFIN:M OR IN'S THEN 60TO 198 ELS	400 PRINT:PRINT"THE INDUSTRIES MADE A PROFIT OF ";PR; "P OUNDS" 410 PRINT:PRINT:PRINT:PRINT"PRESS (ENTER) TO CONTINUE." :EXECALITA 415 PLAY "T25%CCECCLCCCCCC" 420 GOTO 150 430 CLS:PRINT "************************************
E M=M-IN 2.8 IF IN* (M+FO+IN+DE)/4 THEN GOSUB 1000 220 IF DE< (M+IN+FO+DE)/5 THEN 260 230 IF FO< (M+DE+IN+FO)/20 THEN 4/8 240 PR=IN+RND(5)-RND(6786):M=PR+M 245 IF M=>1000000 THEN GOSUB 2000	24, "YOU HAVE GEEN BOOTED OUT OF 10 DOWNING STREET. YOU RAN OUT OF MONEY!!!!!!!! 440 PRINT*YOU LASTED "; TM; "MONTHS" 450 END 460 CLS:PRINT"************************************

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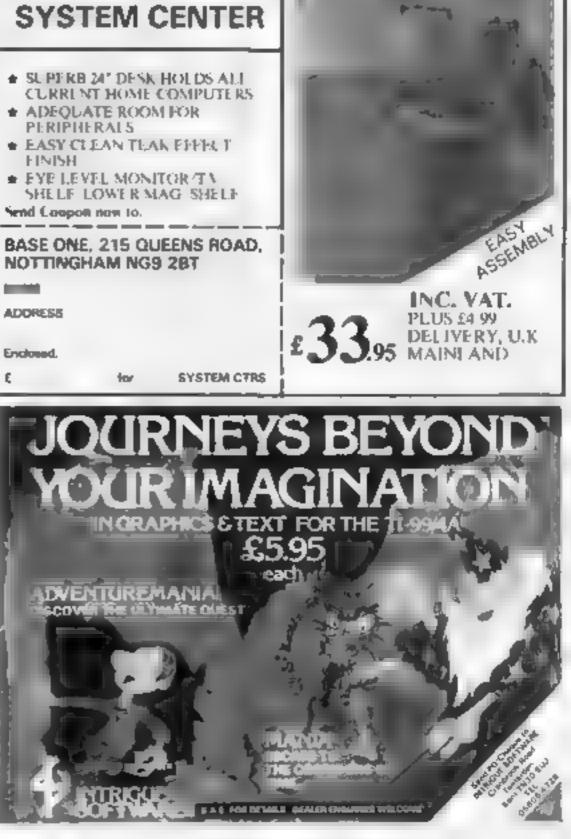
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## Whoops!

Robot Riot, costing £5 95 for the 48K Spectrum, is by Silversoft, of 271/273 King STreet, London W6 9LZ, and Heist, the BBC game, is by Softspot, 29 South Crescent, Prittlewell, Southend SS2 6TB. These details correct errors in our review pages HCW review team

## Heip me over Hobbit

You announced in your news section in November that a BBC version of The Hobbit had been released by Melbourne House and I purchased a copy of this tape for use over the Christmas period

First of all, 1 encountered the same problem as your reviewer (HCW 44, Jan 10) in that one side of the lape would not load on my BBC model B or on two other machines owned by friends.

The second side of the tape loaded with difficulty, but you could eventually get the program loaded and running

But after a short time problems occurred The two "windows" merged, with the communication window displaying into the adventure window, answers given when no questions were asked and answers given incorrectly, e.g. "you cannol go south" when you had typed in "go north".

I had the same results on my friends' machines and on all three computers the program finally seized up with the SHIFT LOCK light coming on and all functions ceasing, except for the final BRFAK

I duly returned the tape to Melbourne House, in Jeddington, Middlesex, on December 28 and have not heard a word since They are among your regular advertisers, so would you please take up the matter with them? D. E. Keightley, Welfordon-Avon, Warwickshire

# LETTERS

Send your letter to Letters, Home Computing Weekly, No.1 Golden Square, London W1R 3AB. Don't forget to name your computer — the best letter could win £5-worth of software. Got a problem with your micro? We'll soon be starting a queries page, so send your technical questions to Queries at the above address



partment at Church Yurd, Tring, Herts HP23 51 U The phone number is 044282 6649. Sales and marketing enquiries should continue to be sent to our new offices in Richmond, Surrey.

"We have sent a re placement copy of The Hobbit to Mr Keightley and we hope he has muny hours of enjoyment with it "

# Seeking

I am the owner of a Memotech MTX 500 and an avid reader of your magazine But, for a computer that has so much going for it, I only know of one firm that produces software for it

So could you please inform all other MTX 500 users that they are not alone in wanting software that will use the full capabilities of this excellent computer

Maybe one day in the near future we'll see printed some reviews for MTX 500/512 software — perhaps by myself when 1 get better at programming

A. W. King. Lisburn,

touch with them that way I would be most grateful if you could assist us in any way, as you appear to have helped many other readers Alan James, Leek, Staffs

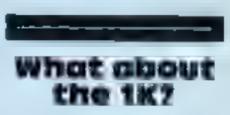
Tony Love, proprietor of Arcadia Software, said 'There seems to have been a shp-up somewhere. We are sorry that Mr James did not receive the tape. We are sending a copy of Invaders to him by first class post today and we know he will enjoy playing it.''



I am writing to try and clarify a point made by one of your reviewers in HCW 48 when he claims: "I can never remember seeing a dotted semibreve resi Perhaps they have just evaded me. "Well that is the case — they have evaded him

I have been playing E flat tuba in brass bands for several years and in music where there are in excess of four parts, as the reviewer probably well knows, rests of short or long periods are frequent. If the time signature is 6/4 or 12/4, then the dotted semibreve rest can become quite a common occurence especi ally in the very rare 9/4 time

I am not trying to enticise the reviewer in any way, it's just a point I feel should be put straight John Wisbey, Aberililery



Alfred Milgrom, managing director of Melbourne House, said: "My staff has searched the records thoroughly and we can find no trace of Mr Keightley's tape. This could, of course, be due to the Christmas post

"However, we would like to apologise to him for the obvious inconvenience

"Our policy is that when we receive a faulty tape, which is quite rare, we always replace it with a brand new one straight uway.

"These, and any other enquiries, should be sent to our customer services deNorthern Iceland



# the way

Following a review in your magazine, I asked my wife, Rosahe, to buy me Invaders for the 48K Orie, from Arcadia Software, of Swansea, for a Christmas present. She sent a cheque for £5 50 at the beginning of December

When nothing arrived by Christmas we assumed that it was due to the Christmas rush and held on for another fortnight

A bank statement then showed that the cheque had been cashed before Christmas and I wrote to the company on January 16 asking them to send the game or refund the money

We have received nothing Directory Enquines has no telephone number for the company, so I cannot get in I have only one question to ask you ZX81 owners. Why aren't you sending any IK games?

It's easy for you 16K owners sending in programs but the IK owners (of which there are a lot) — come on, send in your programs and this will make the other owners happier as there aren't many IK games about

Robert Jones, Burton-on-Trent

# New club

We have just started a computer club in our area covering all types of computers. Can you give us a mention in your magazine? We meet twice a week Monday and Friday evenings 7pm to 9pm at The Co-op Rooms, 20p entrance fee M. A. Richards, Secretary, Racha Chards, Secretary,

Roche Computer Club, 8 Victoria Road, Roche, Cornwall

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